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TWENTY-FIRST BIENNIAL REPORT

OF THE

Kansas

State Board of Agriculture

**TO THE LEGISLATURE OF THE STATE,
FOR THE YEARS 1917 AND 1918**

**DEVOTED TO THE STATE'S RURAL CONDITIONS AND THEIR IMPROVEMENT,
TO THE RAISING OF BETTER CROPS AND LIVESTOCK; TOGETHER
WITH THE AGRICULTURAL AND OTHER STATISTICS**

TOPEKA

KANSAS STATE BOARD OF AGRICULTURE

1919

KANSAS STATE BOARD OF AGRICULTURE, 1918.

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METEOROLOGIST,		S. D. FLORA,	Topeka.
		(U. S. Weather Bureau.)	

* Deceased.

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Vol. 26, cop. 2

OFFICE OF THE STATE BOARD OF AGRICULTURE,
TOPEKA, KAN., January 1, 1919.

To His Excellency, Arthur Capper, Governor of Kansas:

We have the honor to transmit herewith the Twenty-first
Biennial Report of the Kansas State Board of Agriculture,
for the years 1917 and 1918.

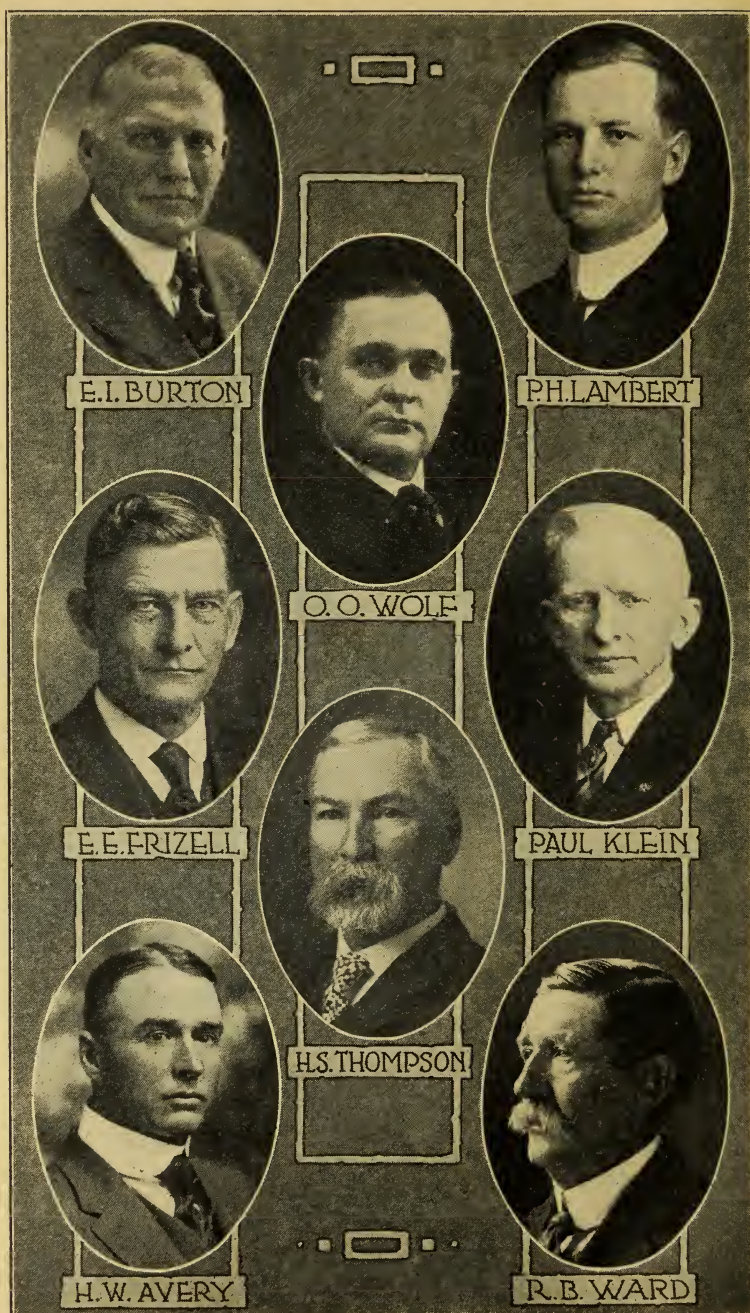
Very respectfully,

J. C. MOHLER, *Secretary.*

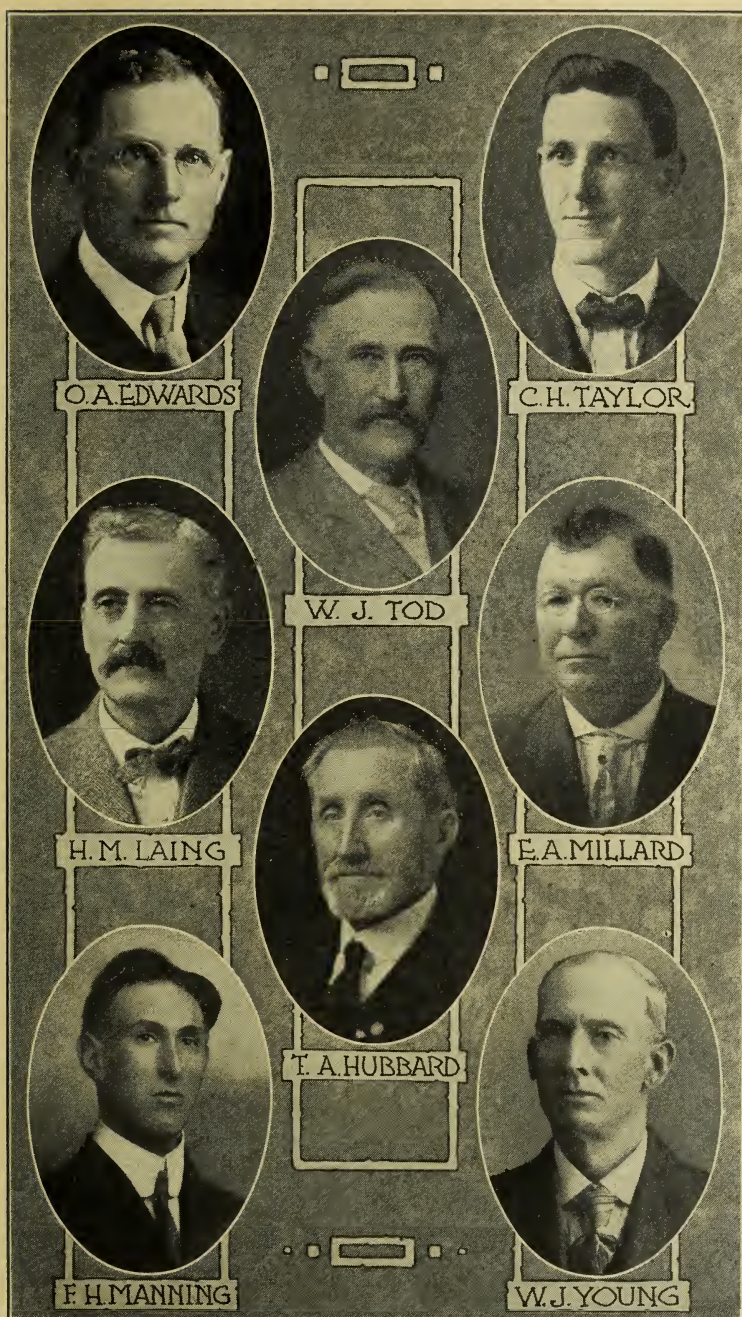
O. O. WOLF, *President.*

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MEMBERS OF KANSAS STATE BOARD OF AGRICULTURE, 1918.



MEMBERS OF KANSAS STATE BOARD OF AGRICULTURE, 1918.

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PREFACE.

OFFICE OF THE STATE BOARD OF AGRICULTURE,
TOPEKA, KAN., January 1, 1919.

To the Legislature of Kansas:

This volume is respectfully submitted by the State Board of Agriculture as its twenty-first biennial report, for the years 1917 and 1918.

As this report embraces a period during which the United States was a belligerent in the Great War, it is appropriate to present a brief summary of the efforts of the Kansas farmers toward crowning the allied arms with victory.

It is, of course, true that during the first years of the war, when our own country was a neutral nation, the urgent demands of stricken Europe for food, and the resultant high prices, gave impetus to our agriculture. As the great conflict was initiated in July 1914, when the season of planting had passed in Kansas, the war's influence on agricultural production could not make itself felt in the "Sunflower State" until in 1915. In that year the total area devoted to cultivated crops amounted to 21,210,000 acres, or about 200,000 more than for 1914. In 1916, the crop acreage amounted to 22,722,600 acres, or a gain of 1,500,000 over 1915, which indicates quite clearly the effect of the war in stimulating agricultural industry while the United States was still a noncombatant.

Following the declaration by Congress April 6, 1917, that a state of war existed between this country and Germany, an appeal was immediately issued to the farmers of this nation setting forth that the allied cause was imperiled by starvation conditions in Europe, that "food will win the war," and that the primary service of greatest importance was to increase food production to the maximum, not only to provide abundantly for the sustenance of the armies and peoples of the nations with which we were associated, but in order that the standards of living might suffer no decline in our own country. Thus, the first call of the country after the United States entered the war, was addressed to the husbandmen, to increase production.

With a splendid spirit of patriotism, the farmers of Kansas responded to this appeal by setting a new mark in the scale of their operations. Although the wheat that was planted for the year's crop, in the fall preceding, amounted to 9,588,000 acres, and was the largest for the state up to that time, yet the total crop acreage in Kansas for 1917 was still further and very greatly increased, and amounted to 28,312,000 acres, or 5,590,000 more than in 1916.

In acres planted, Kansas reached the highest point in her history in 1917. Owing to the draft and the demands of other war industries reducing the supply of farm labor, there was a falling off in farming operations in 1918, as indicated by the total of 25,376,000 acres planted, or less by about 3,000,000 than for the year preceding. The farmers were able to make such a showing in the last year of the war only through the more extensive employment of modern machinery, as the tractor, the number of which has probably doubled in the past year; by working harder and for longer hours, and planning ahead.

In order that no confusion may result in any comparisons of these statements concerning acreages with the statistical summaries printed elsewhere in this volume, which as to wheat take into account only the acres *harvested*, it may be stated that in this preface the farmers are given credit for the areas of land upon which wheat failed that were replanted to other crops. The farmer is justly entitled to credit for both operations, as effort, time and money were expended in each. Moreover, the fact that extensive areas devoted to a crop that failed, as was the case with wheat in 1917, were largely replanted to other crops, suggests the farmers' determination to do their utmost toward making possible maximum productions for the year. By planting maximum acreages the farmers fulfilled the primary requirements for larger aggregate yields.

It does not follow, however, that the size of the harvest is gauged by the acreages planted, nor by the labor expended, for, as a matter of fact, unfavorable weather largely offset, if not wholly overcame, the extraordinary efforts put forth by our farmers during the two years that our country was at war.

No less determination was shown in increasing livestock productions than in increasing crop productions. While handicaps were encountered in shortage and high prices of feed-

stuffs because of serious crop losses, failure of pasture to afford sufficient grazing owing to dry weather, inadequate stock water in some localities, and unstable markets, productions were kept at a mark that can be accounted for only by the patriotic desire of our farmer-stockmen to meet the war's demands. While there were fluctuations in numbers of livestock during the war, more meat and milk producing animals were reported on the farms of Kansas in 1918, the last year of the war, than in 1914, the first year of the war.

Great as is the diversity of Kansas' productions, and huge as is the annual tonnage of foodstuffs yielded, the outstanding feature of the state's agricultural industry during the war was its productions of wheat. Always a chief consideration in the world's foodstuff supply, in times of war the consequence of wheat is emphasized because of its peculiar importance from a military point of view. During the war-period (1914-'18) the total production of wheat in Kansas amounted to 529,169,000 bushels, worth \$716,839,000, as against 429,897,000 bushels, worth \$591,446,000, of the state ranking second. The average annual production of Kansas in that time amounted to more than 105,000,000 bushels. The real bigness of this achievement is the better appreciated when it is brought to attention that in only one year previous to the war did the state ever produce so much as 100,000,000 bushels. In one of the war-years Kansas raised about one-fifth of the entire wheat crop of the United States, and in another, approximately one-sixth. Comparing the war period, 1914-1918, with the pre-war period of 1909-1913, Kansas increased the average annual seeding to wheat 34.54 percent, and increased average annual production 43 percent, as against gains for the rest of the United States of 23.61 percent in acreage and 24.16 percent in production. Should the value of these remarkable contributions be measured by the following appreciation of wheat as expressed by a noted economist, then Kansas, through her preëminent leadership in the production of this single cereal, was indeed a mighty factor in winning the war, and therefore, in shaping the destiny of the world: "Wheat, the source of the staff of life; the cheapest and best of all our American foods; the deciding factor in the war; the greatest single element in the conclusion of peace, and to-day the strongest bar against Bolshevism! Wheat, the great staple food of man, the civilizer of humanity, the greatest single find of all time, except iron!"

The war record plainly shows that our farmers not only rose to the emergency in a way that proved their mettle, but did so in a manner strikingly to manifest their patriotism and deep-seated devotion to country. The farming fraternity of Kansas furnished its quota of men for army and navy service; subscribed liberally to the Red Cross and other war activities, and invested heavily in liberty bonds and war savings stamps, but after all, with due regard to the vital importance of these contributions, and acknowledging the incomparable sacrifices of those who staked their lives for the liberty and freedom of the world, Kansas' greatest opportunity to serve was realized through the utmost utilization of her God-given advantages for food production.

A review of the state's agriculture for the biennium to which this report particularly relates, and covering the period of our participation in the Great War, shows that while acreages planted to crops were greater by about 10 million acres than in any preceding biennium, unfavorable weather conditions prevented maximum yields, and farm products fell short in bulk of equalling records of production established previously in years when the seasons were more hospitable but the acreages in crops smaller. Because of war prices, however, the values of farm products in the two-year period, amounting to \$1,099,500,000, were greater than in the best preceding biennium, which was 1915-1916, by more than \$385,000,000. The state's livestock on hand in 1918 was worth \$361,868,000, or \$9,200,000 more than in the best prior year—1917.

Principally owing to the extremely dry weather that prevailed throughout the winter of 1916-'17, and the blowing of the soil by the wind, it was apparent early in the spring of 1917 that a large proportion of the record planting of 9,588,000 acres of winter wheat would be a total failure. As it turned out, only 3,528,600 acres of the entire area sown were harvested, with the result that the year's production for the state of 41,563,000 bushels (including 84,000 bushels of spring wheat) was the smallest since 1896. As the loss of wheat was sustained in the forepart of the growing season there was ample time to plant other crops on the abandoned wheat ground. That this was done to a very marked degree is shown by the records. Of the approximately 6,000,000 acres of wheat that failed, 5,000,000 acres were planted to spring crops, as

corn, oats, barley, and the sorghums, and these crops were all decidedly increased in acreages over the preceding year. In fact, the area planted to corn in 1917 was the largest in the history of the state, or 9,162,000 acres. It exceeded the acreage of corn planted in 1916 by more than 2,000,000 acres, and was twice as much as the corn acreage in 1915. To replant such a tremendous acreage in addition to the area usually devoted to spring crops is splendid evidence that the Kansas farmer was striving to the utmost to relieve the serious food situation confronting the world at the time the United States entered the war. But, in the planting of the 5,000,000 acres twice in the hope of harvesting one crop, our farmers in large measure were doomed to disappointment. To many even such an inadequate return was denied, for much of the corn failed to make grain, owing to high temperatures, hot winds, and lack of moisture, the yield per acre on the total acreage planted amounting only to 11.59 bushels, or an aggregate for the state of 106,166,000 bushels. A particularly distressing feature was that the corn yielded little or nothing in many of the counties where large areas of abandoned wheat ground were planted to corn. The aggregate production of corn in 1917, however, was larger than for the preceding year and the same is true of the total yields of rye, all the sorghums, including broom corn, and of oats; in fact the oats crop of 60,612,000 bushels was the largest ever reported for Kansas, more than twice the yield of 1916 and worth more per bushel than in any season since 1865. Crops that were under the preceding year's outputs are wheat, barley, potatoes, alfalfa and prairie hay.

While in 1917 Kansas raised a fairly large corn crop and a small wheat crop, the exact opposite was experienced in 1918, when 93,000,000 bushels of wheat were produced and only 44,500,000 bushels of corn. Although the wheat crop of 1918 was the state's sixth largest, and about 125 percent more than that of 1917, there were again severe losses in some portions and the abandoned acreage amounted to one-third of that sown, leaving 6,800,000 acres that were harvested. For most of the state the corn crop was practically a failure and the aggregate yield was the third smallest in 44 years, while the output of hay was decidedly below the standard of production, all of which is charged to hot, dry weather that adversely affected practically all crops.

No review of the state's agriculture in 1918 would be by any means complete without reference to the phenomenal acreage that was planted to wheat in the fall of that year for the crop of 1919. Growers estimate it as amounting to about 11,000,000 acres, and exceeding by far all previous records. It is possibly the largest acreage ever devoted to a single crop in any state, and is approximately one-fourth of all the winter wheat sown in the United States last fall. A more adequate comprehension of the magnitude of this wheat field may be had, perhaps, from the statement that it exceeds the total land surface of the four states of Massachusetts, Connecticut, Rhode Island and Delaware combined, with the District of Columbia added for good measure. Kansas is the first state in the Union to have reached, let alone exceeded, the 10,000,000-acre-mark in wheat, thus more firmly establishing her long maintained leadership in wheat growing. The needs of the world for wheat and the fact that the cultivated fields where corn failed provided practically summer-fallowed seed beds for fall sowing were the factors that brought about the planting of this record-smashing area to wheat.

As to prices in 1918, wheat averaged about \$2 a bushel, or 6 cents lower than in the preceding year; corn \$1.44, or 31 cents more; oats 70 cents, or 10 cents more; kafir \$1.54, or 12 cents more; alfalfa \$21 a ton, or \$3 more; and prairie hay \$17, or \$3 more, while potatoes ranged nearly the same.

There were small decreases in 1917 in the number of all kinds of livestock except "Other (beef) Cattle," which were more by 137,000 head. In 1918 other cattle fell off in numbers nearly 100,000 and there was a further decrease in mules, while increases were reported for all other kinds of livestock, notably for milk cows and hogs, which gained 103,000 and 110,000, respectively. Attention should be directed to the fact that under a new classification, adopted in 1917, comprehending under "Milk Cows" only cows kept for milk production, the number of milk cows as returned by assessors that year was 580,213, as against 1,077,067 in 1916, when all dairy stock was included under the heading "Milk Cows." Manifestly the old method was misleading, and to correct it, as well as to avoid possible duplications in returns, the change was made. Dairy stock not kept exclusively for milk is now reported under other cattle.

The values of all livestock, except for horses, were increased in 1918 over those of the year before, as follows: mules, \$5 higher, or \$140 each; milk cows \$7 higher, or \$82 each; other cattle \$4 higher, or \$54 per head; sheep \$1.50 higher, or \$12.50 per head; and swine \$2 higher, or \$22.50 each. Horses decreased an average of \$9 each and were valued at \$111 per head.

Animal products in 1918 were worth more than ever before, amounting to \$145,000,000 as against about \$112,000,000, the highest prior value, in 1917. As is always the case, the item contributing most largely to this showing is that of animals slaughtered or sold for slaughter, amounting in the last year of the present biennium (1918) to \$108,073,000, as against \$81,596,000 in the first year of the biennium. The increase from poultry was about \$640,000, and the value of dairy products greater by about \$6,000,000.

While the value of Kansas farm products in 1917 and 1918 was greater than the value in any previous biennium, this should not be construed as meaning that the net profits from farming have been greater. For, as a matter of fact, in some sections of the state, from the standpoint of net profits, the biennium covered by this report ranks, perhaps, among the poorest. In those sections where a happy combination of high yields and high prices of grain crops prevailed, it is true that satisfactory returns were obtained. On the other hand, vast areas of crops in other sections failed absolutely or in part and heavy losses resulted. For instance, in 1917 almost two-thirds of the winter wheat area was wholly abandoned because of winter killing, and the corn crops of the two years averaged below ten bushels to the acre, yields having been cut short by dry weather. Furthermore, the high prices of farm crops have in sections of crop failure placed an added burden upon the farmer, because he has been forced to go into the open market and buy feedstuffs for livestock which he must continue to retain on his farm, a thing he ordinarily does not have to do. The scarcity and consequent high price of farm labor and the greatly increased cost of all supplies that must be constantly bought for the farm are also to be considered. Hence, although Kansas farm products have wonderfully increased in value, there should be no misunderstanding about a similarly wonder-

ful increase in cost of production, bringing about in many instances actual losses.

During the war, while the farmers of Kansas were distinguishing themselves by patriotic endeavors, opportunities for increased usefulness were opened to the Board of Agriculture by action of the legislature of 1917. At this session a long-needed amendment to the law governing the organization of the Board was made. Operating under the new law, equitable distribution of representation is not only had, but the delegates to the annual meetings admirably represent those who are developing and upbuilding the state's preëminent industry—agriculture. The delegates choose the members or directors of the Board as heretofore, with the difference that two members are chosen from each congressional district, which means that the Board is properly represented in every portion of the state. The Board consequently is in more intimate contact and enjoys closer relationship with the husbandmen throughout Kansas and is in position to better understand the farmers' problems and to approach the solution of such problems with greater intelligence and keener sympathy.

In harmony with the spirit of the new law, the Board chosen under its provisions has taken a long step forward by holding quarterly meetings, and other meetings, on call, at such times as emergencies may require. In this way it is possible to keep constantly apprized of current developments and needs of the season as it passes, for the state and each district, through its district members. As a result the Board is enabled to render a greatly enlarged and more efficient service to our farmers in promptly dealing with problems as they arise.

As an instance of this may be cited the service rendered in ascertaining the need of and obtaining the federal seed-wheat loan of last fall. Investigation revealed that, owing to two successive crop failures where wheat was extensively sown, often to the exclusion of other crops, the finances of many farmers were depleted and their credit exhausted. Banks had made loans up to legal limits, and without assistance the farmers in such territory would be unable to sow a normal acreage of wheat. Considering these facts, the Board, believing it imperative to maintain the acreage of wheat to meet the world's demand for bread, authorized a committee to proceed to Washington to present the matter, as a war measure, to the

proper government officials. The net result was an appropriation, from President Wilson's special emergency fund, of \$5,000,000, to be used for seed-wheat loans, not only in Kansas, but in Oklahoma, Texas, Colorado, and New Mexico. Striving primarily to make possible the utmost utilization of our resources for wheat raising through government assistance, the Board's efforts happily proved of much benefit along similar lines in other states as well. The area of wheat sown in Kansas last fall, which would not have been sown had the loans not been made available, amounted to 365,000 acres, the total of the Kansas loans aggregating \$1,046,000.

Aside from services of this character, the Board let pass no opportunity to promote the winning of the war. Every effort was bent to the task of stimulating the production of food in Kansas. When the Kansas Council of Defense was organized, the entire machinery of the Board was placed at its disposal. In fact, the Board's office served as a clearing house for the Council of Defense work, and the Board's secretary served also as the Council's secretary. The Board's office force and its funds were used without stint in keeping Kansas at the front in war work from the date the State Council of Defense was first organized until the signing of the armistice. At the same time the usual duties of the Board were performed.

That the Board was able to discharge the additional obligations imposed by the war was made possible by the loyal, untiring and intelligent service of its office force, composed of I. E. Davis, assistant secretary; H. W. Doyle, special assistant secretary; J. H. McAdams, chief clerk; H. M. Starr, statistician; Earl H. Loomis (resigned and entered army service as a volunteer, now sergeant, 110th Field Signal Battalion, in France); H. H. Haynes, Earl S. Palmatier (resigned to enter the S. A. T. C. at Washburn College); Edith Mohny and Cecile Davis. Special mention is also made of T. D. Hammatt, assistant secretary of the State Council of Defense, who materially assisted at such times as his other war activities would permit, and without thought of remuneration—a fine example of the volunteer in war work in the ranks of the civilians. Particular acknowledgment is made of the very efficient services of I. E. Davis, assistant secretary. Having charge of the statistical work, he is engaged in one of the Board's most im-

portant positions, the duties of which the public has little opportunity to properly appreciate. Quiet, capable, painstaking and willing, he is one of the state's most valued servants, and it is a genuine pleasure to record this word of commendation that is so richly deserved.

J. C. MOHLER, *Secretary.*

RURAL WELFARE.

VOCATIONAL AGRICULTURE IN THE HIGH SCHOOL.

By J. W. ZAHNLEY, Kansas State Agricultural College, Manhattan.

FIFTEEN of the 600 high schools in Kansas are offering an opportunity to the boy who wishes to become a farmer to get the kind of training which will enable him to do a real first-class job. These high schools are scattered from Webster and Garden City in the west end of the state to Ft. Scott and Tonganoxie in the east end. They are doing the kind of work



FIG. 1. Steve Merrill, of Garden City, harvesting his cane, August 14, 1918.

that any rural high school in the state might do. Furthermore, it is the kind of work that every rural high school ought to do.

The time has come when the public school system of the state must give as helpful training to the boy who runs the old home farm as it does to his brother who becomes an experiment station expert, or a doctor or lawyer. That kind of training, or work in vocational agriculture, must be given in the local high school and it must include two things: A study of the best practices and the scientific reasons underlying those practices, and then actual practice in conducting projects under the supervision of a well-trained instructor.

Only a few years ago agriculture was introduced into the high schools. It was first taught as any other academic subject. Later, copying after the sciences, the work of the text book was supplemented by laboratory exercises. This was good, but agriculture is a vocation, the occupation of a great majority of the people of this middle west, and after all were we teaching agriculture or were we just teaching *about* agriculture? Are we not yet confining the students within the four walls of the school room to teach them agriculture when nature, with all her wealth of agricultural information, is waiting just outside, ready to open her pages to satisfy the active, inquiring mind of the boy. Herbert Quick has said that the home farm affords a better laboratory than money can buy if only we can develop a school system that will make use of it. Thanks to those who have been crusaders against the academic type of agriculture teaching, such a system is being rapidly developed.

The predominating aim of agriculture teaching is vocational, giving not only the theory but the training for actual farm operations. If our agriculture teaching in the high school fails to make the boy a better and more efficient farmer, it has failed in its ultimate purpose. Boys, like everyone else, learn to do by doing and not by reading a bulletin or text book. That kind of agriculture teaching which will give the boy practice and develop skill in farm operations, is likely to prove most helpful to him when he is thrown upon his own resources to make a living. Just how to afford opportunity for the student to do this practical work is a problem that has caused much speculation and experimentation with various methods. The school garden and the school farm have been held by many as the solution for the problem of practical work and these have attracted wide attention in the past. These have not proved the success that was hoped for in many cases. Wherever it is possible for the student to do his practical work at home there seems little justification for taking him away from the home farm to give him training in a line along which the home affords the best educational plant that can be had.

THE HOME PROJECT PLAN.

For the past five or six years agriculture has been successfully taught as a vocational subject by the aid of the home project. Massachusetts was the first state to make use of this

method. The plan was soon introduced into New York, Pennsylvania, New Jersey, and Indiana, all of which gave state aid to vocational agriculture based on the project plan. The success of the home project in teaching vocational agriculture created such wide interest in the plan that it was made one of the essential features of the Smith-Hughes Vocational Education Act passed by congress in 1917. Since that time schools in every state in the Union have been attempting to make wider use of the home farm in the teaching of agriculture.



FIG. 2. Arthur Trissel, of Garden City, in his field of sweet corn.

In Kansas the home project plan is being carried out successfully in thirteen high schools representing all four classes: namely, city, county, consolidated, and rural high schools. The consolidated high school at Webster, Kansas, a small inland town five miles from a railroad, in Rooks County, is successfully carrying on this work. The rural high school at Havensville, Kansas, organized this year, has included the vocational agriculture. County high schools of Dickinson, Atchison, and Crawford counties, and a number of city high schools are included in the list.

A summary of the work carried on in one of the city high schools of Kansas in 1918 will serve as an example to show somewhat of the character and extent of the work being done. The following is a copy of the summary report of the teacher of vocational agriculture, Mr. R. T. Kersey, of the high school at Garden City.

DEPARTMENT OF VOCATIONAL AGRICULTURE.

*Garden City High School, Garden City, Kan.**Summary Report on Project Work, 1918.*

1. Number of students doing project work: Thirteen.
2. Names of students: Gene Austin, Paul Horst, Harley Kelley, Steve Merrill, Millard Mohler, Edward Ruggles, Lee Roome, Charles Roome, Raymond Stevenson, Arthur Trissel, Clay Weldon, William Wagner, Claude Woodard.
3. Kinds of projects: Cane, feterita, kafir, milo, sweet corn, sweet potato.
4. Extent of projects: One hundred forty-seven acres.
5. Average yield per acre of dry land sorghum crops: Seed, 6.4 bushels; forage, 1.18 tons.
6. Total yield of products:

Sorghum grain	734.25 bushels.
Sorghum fodder	296.50 tons.
Sweet potatoes	719.00 bushels.
Sweet corn	200.00 dozen ears.
7. Value of all products: \$3,447.95.
8. Expenses:

Students' labor: 3,190 hours, at 10 cents.....	\$319.00
Horse and tool charge.....	471.60
Materials, seed, power, etc.....	237.40
Hired help	135.25
Rent	833.60
Total	<u>\$1,996.85</u>
9. Net profits: Average, \$111.62; total, \$1,451.10.
10. Remarks: Less than 6 of the 147 acres of crops received any irrigation.
R. T. KERSEY, *Teacher in charge.*

It will be observed that the projects were all along the line of crops. These followed the general line of the major part of the class room study in agriculture for that year. Each student selected his own crop, his choice depending upon several factors—the nature of his soil, the condition of the soil with respect to previous cropping, the expense of producing the crop and the possibilities of profit under existing climatic and soil conditions, his facilities for handling the crop from the standpoint of production and of marketing, and his personal preference. It is from a consideration of these factors and the careful planning and carrying into effect the plans of his project on his own responsibility, that much of the real benefit of this work comes to the boy.

The following reports of individual projects carried on by two boys of the Garden City High School will explain more in detail the nature of the project work:

Report of Farm Project for 1918.

1. Name of student: Paul Horst.
2. Kind of project: Milo.
3. Extent of project: Nine acres.
4. Method of preparing seed bed: April 10, disked east and west; May 1, disked north and south; June 1, single listed east and west.
5. Rate of seeding: Three pounds of seed per acre.
6. Method of cultivation: June 12, harrowed; June 20, harrowed; June 25, disk sled; July 10, five-tooth cultivator; July 28, five-tooth cultivator, following shower.
7. Amount of irrigation: None.
8. Time and method of harvesting: Three acres hand-topped October 5; headed two acres; four acres failed to seed.
9. Yield per acre: Twelve bushels seed and two and one-half tons fodder.
10. Total yield: 108 bushels seed, 22.5 tons fodder.
11. Value of all products:

Seed, 108 bushels, at \$1.60.....	\$172.80
Fodder, 22½ tons, at \$9.....	202.50
	\$375.30
12. Expense:

Student's labor, 210 hours, at 10 cents.....	\$21.00
Horse and tool charge.....	30.00
Materials, seed, power, etc.....	3.00
Hired help	0.00
Rent	22.50
	\$76.50
13. Net profit, \$298.80.
14. Remarks: Yield of seed was materially reduced by too thick a stand.

The above is an account of a project with milo, conducted by the methods of dry farming, about 15 miles south of Garden City, by Paul Horst, age 15 years.



FIG. 3. This is Gene Austin, of Garden City. He is growing sweet potato plants in the hotbed.

The following account of a four-acre sweet potato project was conducted under irrigation by Harley Kelley, age 16 years.

Report of Farm Project for 1918.

1. Name of student: Harley Kelley.
2. Kind of project: Sweet potato.
3. Extent of project: Four acres.
4. Method of preparing seed-bed: Double disked and leveled. Then repeated. Threw up ridges with lister. Smoothed and marked ridges.
5. Rate of seeding: Seven thousand, five hundred plants per acre.
6. Method of cultivation: Hoed top of ridges. Worked furrow with five-tooth cultivator. Threw dirt up with single shovel. Repeated these operations twice.
7. Amount of irrigation: Filled furrows four times.
8. Time and method of harvesting: October 12, plowed ridges one way, cutting vines in opposite way.
9. Yield per acre: One hundred thirty bushels.
10. Total yield: Five hundred twenty bushels.
11. Value of all products:
 520 bushels, at \$1.50..... \$780.00
12. Expense:

Student's labor, 645 hours, at 10 cents.....	\$64.50
Horse and tool charge.....	35.50
Materials, seed, power, etc.....	67.50
Hired help	32.00
Rent	85.00
	\$284.50
13. Net profit, \$495.50
14. Remarks: Harley made a hot-bed and raised 8,000 plants. The remaining plants were bought at 35 cents per hundred. Yield was reduced on three acres by a poor stand.

In planning for such project work it is necessary for the boy first to get the consent of his parents. Arrangements must also be made for land, implements and teams, which should if possible be obtained at home by payment of a reasonable rental. If land and equipment are not available from this source it may be necessary for the students to rent from neighbors. One of the boys at Webster, Kan., this year overcame a difficulty of this sort. He had no land but rented ten acres of a farmer, paying share rent. Then he worked for the farmer to pay for seed and the use of tools and team to do the work of the project. All the capital that boy needed to carry on his project was his ambition and willingness to work. A copy of the agreement between parent and pupil is printed below.

Agreement for Project Work.

(To be made out in duplicate. One for pupil, one for teacher.)

Date.....19.....
 School..... Place.....
 Name of project student..... Age.....
 Year in high school..... P. O. address in full.....
 Location of home.....
 Name of project.....
 (Growing a crop, orchard, dairy, poultry, etc.)
 Extent or scope of project.....
 (Area of land, number of trees, or livestock, etc.)

Agreement of Parent and Pupil.

I hereby agree that.....
 (Name of student.)

shall undertake the above described project for the year.....
 I agree that he shall have the time necessary to do the work required to insure the success of the project and that I will furnish at the rates of rental attached hereto, all tools, equipment, horses, etc., which I own, as they are needed, payment of such rental to be made when project is completed and products sold.

I will advance such cash without interest as is needed for the purchase of materials and supplies, this to be repaid when project products are sold.

I agree to furnish the land and.....
 (Insert stock, trees, etc.)

for.....
 (Insert rental rates.)

rental payment to be made when project products are sold.

I agree that the net proceeds of the project shall be the property of the above named student. In case of a general failure, and if the project fails to pay expenses, I agree to share one-half the net loss in labor or cash, as he may choose.

Signed.....
 (Parent or guardian.)

I agree to undertake the above described project under the conditions of the above agreement.

Approved.....
 (Student.)
 (Teacher of agriculture.)

Projects may be conducted with livestock, employing various kinds of stock and along different lines of livestock production. During the season when the class is engaged in animal husbandry work, the projects will be of this nature. Projects with poultry, pigs, sheep, dairy cows, etc., afford abundant opportunity for intensive study in these different phases of livestock production.

A fair idea of a livestock project may be gained from the

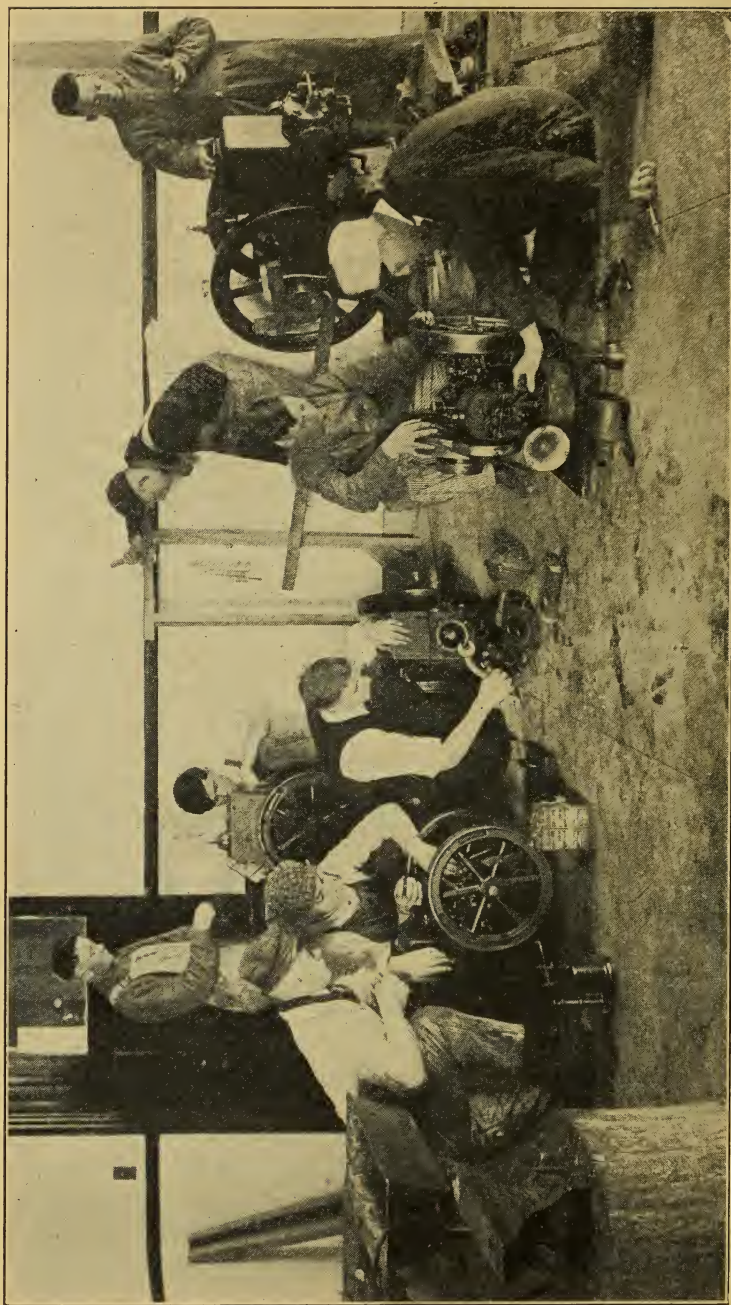


FIG. 4. Boys of the Arkansas City high school repairing and testing gas engines.

summary report of one of the boys in the vocational agriculture class in the Arkansas City High School. The work was conducted under the supervision of L. B. Pollom, instructor in vocational agriculture. Five pigs were used in the project. The feeds used and the price of each were as follows: Corn \$1.50 and feterita grain \$1.35 per bu. Shorts \$2.30 and tankage \$4.00 per cwt. The pigs were fed one hundred and thirty-six days.

Summary Report of Pig Project.

Student, Stedman Chaplin, Arkansas City High School.

Initial weight per pig.....	49 lbs.
Final weight per pig.....	198 lbs.
Gain per pig, 136 days.....	149 lbs.
Gain per pig, 1 day.....	1.1 lbs.
Daily cost of feed per pig.....	13.9 cts.
Total cost of feed per pig, 136 days.....	\$18.91
Cost per pound gain (feed).....	12.7 cts.
Total gain, 5 hogs, 136 days.....	745 lbs.
Total feed cost, 5 hogs, 136 days.....	\$94.55
Total labor cost, 5 hogs, 136 days.....	\$10.00
Initial cost of 5 pigs.....	\$40.35
<hr/>	
Total cost	\$144.90
Total receipts	\$162.99
Total profit	\$18.07
Total profit per pig.....	\$3.61

Neither pasture nor skim milk were available. The student believes his profit would have been greater had the pigs been allowed to run on pasture and given some skim milk. He believes also that it would have been profitable to have continued the feeding period until these hogs weighed about 250 pounds.

This high school will have eighteen such projects running this summer (1919).

During seasons of the year when the actual work of the project is not in progress the time is used in the study of the principles of agriculture, with special reference to the project which is being conducted. The student at this time is gathering all the information he can find bearing on his particular project and making plans for his work. The class discussions are on the principles underlying crop production or of the care and management of livestock, principles of feeding, etc.

Projects are not always carried on individually. The class as a whole, or working in groups, may undertake work aside from the individual projects. Mr. Hearst, the teacher of vocational agriculture, writes of the butchering project conducted



FIG. 5. Butchering as a class project. Crawford County High School.

at the Crawford County High School at Cherokee: "The butchering project was done just as the boys would have to do it at home and was all done by the boys. They fixed up the scalding barrel and platform one evening, heated the water in a couple of wash boilers in the laboratory and butchered the hog the next morning. The carcass was allowed to cool until evening and was carried into the laboratory where the boys cut it up the next morning. Before undertaking the work bulletins on butchering were procured and material from them assigned as a lesson, and the work discussed thoroughly in class. Next year we will plan for three good class projects with our hogs, viz., building a self feeder, feeding the hogs and butchering."

Shop work has been an important factor of the vocational

agriculture in all of the schools. The construction of hog houses, hay racks, poultry houses, out house and coal house for the school, wagon beds, work bench, sewing horses for repairing harness, making rope halters, splicing rope, repairing harness, and numerous other jobs that boys should be able to do on the farm.

HOW THE SCHOOLS ARE FINANCING THE WORK.

The teaching of vocational agriculture is somewhat more expensive than that of ordinary high school work. The expense however is borne very largely by federal and state appropriation. In fact the largest appropriation of federal funds ever made for agricultural education of any nature has been made for this vocational work.

The federal allotments for Kansas under the Smith-Hughes Vocational Education Act, to be used exclusively for the payment of salaries of teachers of vocational agriculture for this year and the two following years are as follows:

1918-1919.....	\$18,194.31
1919-1920.....	24,259.08
1920-1921.....	30,323.85

This continues to increase annually until the allotment for Kansas in 1925-26 and thereafter exceeds \$70,000.00. This amount must be matched dollar for dollar by state appropriation. The two appropriations together provide an immense fund for the promotion of vocational agriculture, amounting to approximately \$15,000,000 annually for the United States. The State and the Federal Government, then, provide for the salary of the teacher leaving the local community to provide for buildings, equipment, land, livestock, etc., that are needed for successfully carrying on the work. For the most part the land, implements, teams and livestock may be provided by the student on his home farm, so that the expense borne by the school is comparatively small.

The home project plan seems to be a fair solution of the problem of practical work. This work has these advantages: (1) of bringing the school and the home in closer touch with each other, (2) it furnishes an opportunity for the boy to learn to do by doing, (3) the responsibility of the enterprise chosen as his project rests upon the individual student, (4) the student may obtain a fair remuneration if his project is carefully managed and in this we have the motivation which is

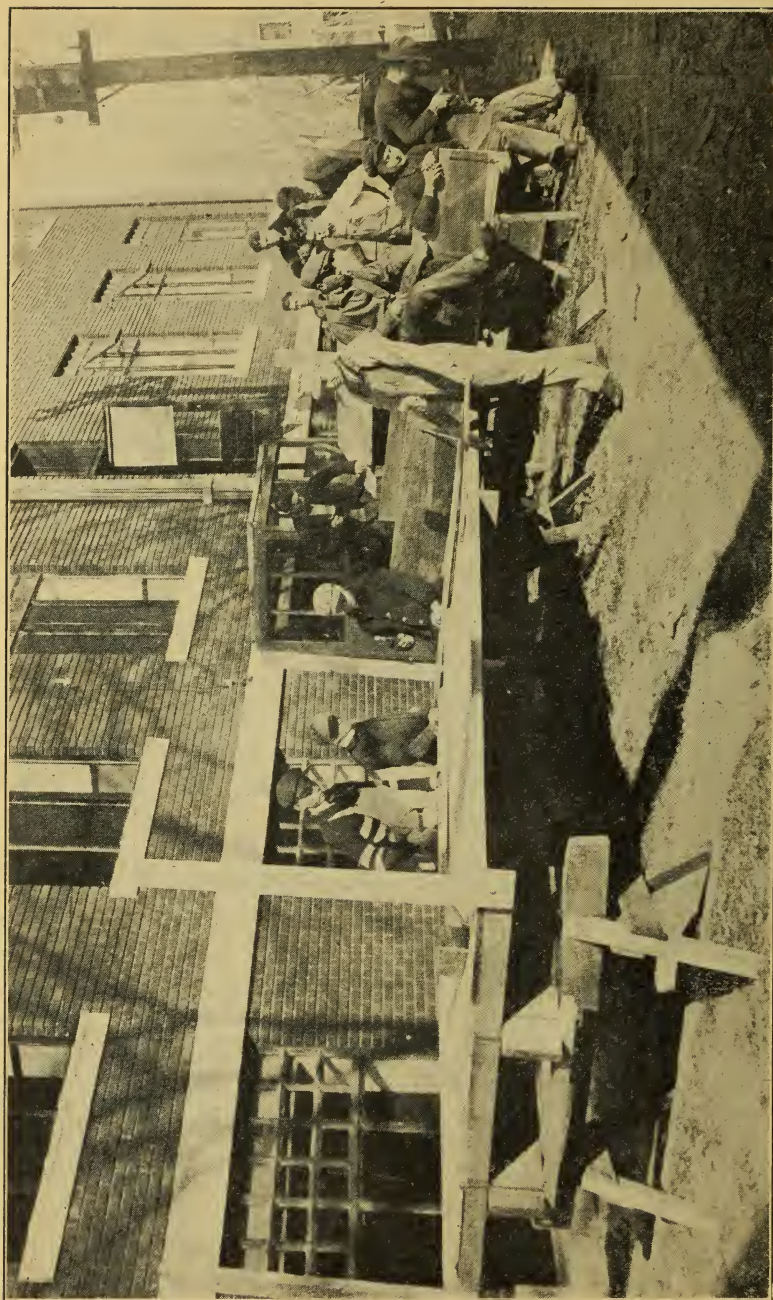


FIG. 6. A class in vocational agriculture building a hay rack, wagon box, and self-feeder, Arkansas City High School. This class made four self-feeders, three hay racks, three wagon boxes, six wagon packs, and fourteen ladders.

conducive to good work, (5) the student works under actual farm conditions and is led to consider the importance of the cost of production as a factor in determining farm profits, (6) proper methods and importance of keeping farm accounts are taught. In short the work is practical. One of the teachers writes of his work: "The boys are doing the work just as they would have to do it on the farm. I find that there is no lack of interest as long as the boys have a project that they can take hold of and do." The schools doing this work are thus serving the community by preparing the boy to remain on the farm, to do the job of farming and to do it well.

Schools wishing to introduce courses in vocational agriculture and to participate in state and federal funds should write to the State Director of Vocational Agriculture, care of State Superintendent of Public Instruction, Topeka, Kansas, for plans and requirements and for blank forms for application.

ADJUSTMENT OF THE RURAL CHURCH TO THE COMMUNITY.

By PAUL L. VOGT, Methodist Episcopal Board of Home Missions and Church Extension, Columbus, Ohio.

FIFTY years ago builders of new communities in pioneer sections of the country expected that population would continue to increase until all institutions provided for would be needed. Consequently in religious life representatives of many of the leading denominations erected churches to serve very small and weak memberships in anticipation of future strength as communities grew.

People then took much more seriously than they do now the minor variations of sectarian beliefs and consequently their religious consciences were not disturbed when they erected church buildings in the presence of buildings already erected in communities by other denominations. This duplication of churches expressed also the prevalent thought at that time that the sole function of the church was a place of worship and the salvation of individual souls from the wrath to come.

Rural America is passing out of this pioneer state and has a heritage of little one-room churches inadequate to present needs and an obligation to provide adequate equipment to meet the needs of a new day. Schools and other agencies have gone

ahead making adequate provision for the service they are to render while the churches have lagged behind. The great religious bodies of America are just now in the midst of a nationwide program of bringing the churches up to the standards of equipment and service demanded, and the next few years bid fair to witness an advance in religious progress such as the world has never seen.

In the adjustment of the church to the rural community certain adaptations between the denominations, as such, are necessary before the local church can in most instances do its work effectively. Allocation of responsibility must be effected so that competition between responsible religious organizations will cease. Two or more churches in a community of less than 1,500 people effectively prevent usefulness of all as agencies for community leadership. The creation of inter-denominational agencies to serve particular groups, such as the Young Men's or Women's Christian Association, or of civic organizations designed to meet community needs has apparently been necessary because of competitive relations between denominations. When allocation of responsibility for community leadership has been worked out, as it is now being worked out with

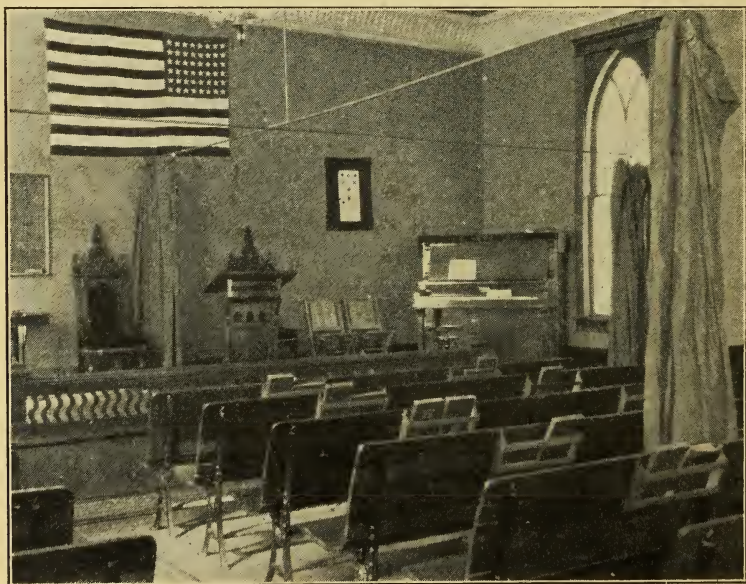


FIG. 7. The interior of a rural church in Brown county.

the hearty coöperation of all the larger responsible denominations, then the local church can put on a program that is indeed an adjustment to modern needs, and the necessity of the creation of special religious or other organizations for doing work that should be done by the church will cease.

The location of the church building must also be carefully considered. In times past, when worship was the sole consideration in deciding on architecture, the location of the church building on the edge of the village or in the open country was adequate. But in the twentieth century when rural and village communities demand a center adequately equipped in every respect for the expression of every phase of the life of the community, and when the commercialized saloon or recreation center is tending to give way to community-controlled recreational and social life, it is necessary that the church building be located as strategically as the corner grocery. It must be where the people gather in the evenings, in the center of the village, where the lights are, regardless of the cost of building space.

Rural America must not be dominated by city ideals of the school house being the social center. In cities the school house can readily be made the center of community activities. In rural villages, it is generally best that the school house be located on the edge of the village where ample play space may be secured. The social center of the village must be where the people naturally gather and this is not out on the edge of town, however small the town may be. Consequently the community church, or neighborhood house, should be placed where the people can use it.

The architecture of the building should be adapted to the modern needs of worship, religious education, and community service. In the small village the church building should provide ample auditoriums for public occasions of all kinds, play room for athletic games and for literary entertainments, club rooms for both men and women, rest rooms, toilets, shower baths, offices for community secretaries, public library space, and space for such other needs as may be apparent to each community concerned. Each community should build its church or parish house, if an adequate place of worship and religious education already exist, according to the needs not already provided for by other agencies. And this equipment should be

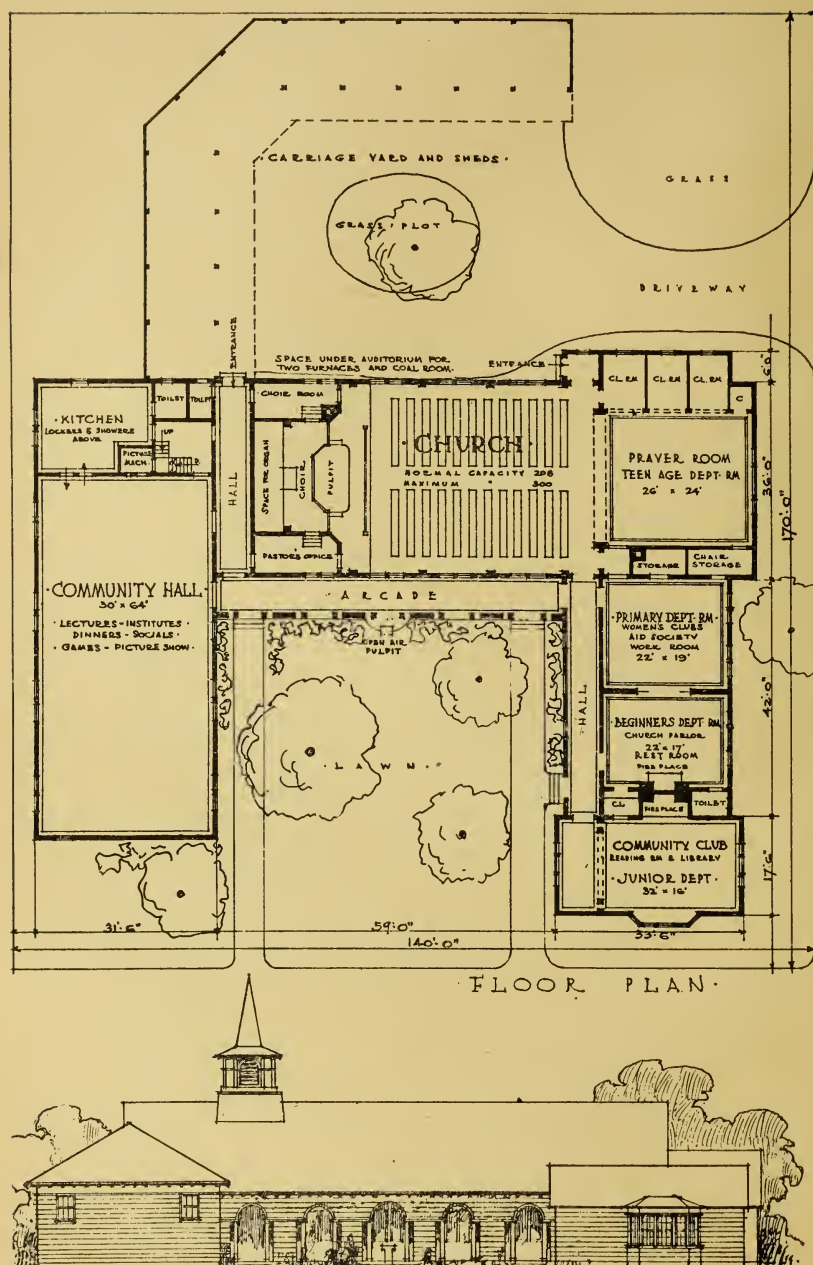


FIG. 8. A plan for a model rural church.

provided not in terms of the fancied ability of the community to pay but in terms of the probable needs of the community for a generation or more to come. The present generation has no right to handicap the coming generation by inadequate equipment.

After equipment is provided the church must then work out a program of real service in harmony with the needs of each particular community. It is impossible to do more than suggest the many things that the modern rural pastor finds awaiting his leadership in most rural communities to-day. Rural America has been thought by many to be the ideal place to live. As a matter of fact the almost constant movement of the young people of both sexes to the great cities and of the older people to the villages and cities during the past twenty or thirty years, and the general low esteem in which rural life is held by those who have lived in a suburban environment is evidence that rural life is anything but ideal.

The minister of the Gospel who has attended a college in Chicago, and a Theological Seminary in Boston, where he and his family have had the privilege of living in a house that is equipped with electric lights, has a furnace, inside toilets, and abundant water supply, and where they have had access to the best literature, art, music and recreational facilities, does not look with pleasure upon service in a village community in the corn belt where land may be worth two hundred dollars an acre, but where the people have no community loyalty, where the young people have forgotten how to play, where but few of them go beyond the common schools and educational interest is low, where roads are still bad, where, particularly in villages, the houses are still lacking in water supply and toilet facilities, and are heated in a most primitive fashion; where medical attendance is inadequate, where typhoid fever and other diseases still hold sway; and where he and his family are cut off in large measure from the contacts that he has learned to appreciate. The basis for his dislike is his challenge to service, because rural and village life will never be what it ought to be until living conditions are comparable in every respect with the best to be found anywhere.

The experience as outlined in the preceding paragraph of the young theological seminary graduate just assigned to a village church in the corn belt, the best agricultural section of the

United States, may be amplified and painted in far darker colors for the remainder of rural America. The illiteracy of the southern highlanders, the prevalence of venereal disease in certain distinctly rural sections, greater defectiveness among children, poor schools and poorer churches, poor housing, poor roads, absolute poverty because of the relatively smaller proportion of the total wealth of America going to the farmer, all find their expression in other sections to a far greater degree than they do in the corn belt.

The natural agency for leadership in bringing about a better rural life is the church. Christ said, "I came that ye might have life and have it more abundantly." Although other agencies have been surpassing the church in many respects in their expression of the Christian ideal, the Christian ministry is still respected in most rural communities because of its traditions, and the people are only waiting the arrival of the new type of pastor who has a deep sympathy with and love for country people, who has the vision of the largeness of the task of leading in rural life, and who has the training necessary for the specialized service demanded by modern rural life.

The greatest and most important step in the adjustment of the church to the rural community is that of finding this new leadership. It is a sad commentary on the missionary spirit of many pastors in rural communities that they are ambitious to get away from the service of farmer folk to the supposedly more "respectable" and undoubtedly more remunerative suburban charges in the great cities. But the new rural idealism that is developing among farmers themselves is finding its expression in the appearance of a rapidly increasing number of young leaders in the ministry who have taken their training specifically for rural service, who see the great work to be done, and who have cast in their lot with their own people, to bear the hardships of the upward climb of country folk to better life and ultimately to enjoy with them the Christian civilization and culture that is bound eventually ultimately to crown their loyal service.

Two or three illustrations from many that are now available of what the new day is bringing may be given. One of the most remarkable developments in the country is to be found among the colored folks in Mississippi. The Rev. M. T. J. Howard, superintendent of the Brookhaven District, Missis-

issippi Conference of the Methodist Episcopal Church, has embarked on a program of "better farming, better business, better living." In coöperation with the state authorities he has established a 40-acre demonstration farm for his district and has an agricultural agent for his people on the district. His people have this year shipped their first carload of hogs coöperatively. He has plans for the development of a credit union to help his people to free themselves from the credit system which has kept many of them in poverty. At his district center he will have an agricultural high school, a home for retired ministers, a model rural church, the district superintendent's residence, and the homes of the district nurse and the district agent.

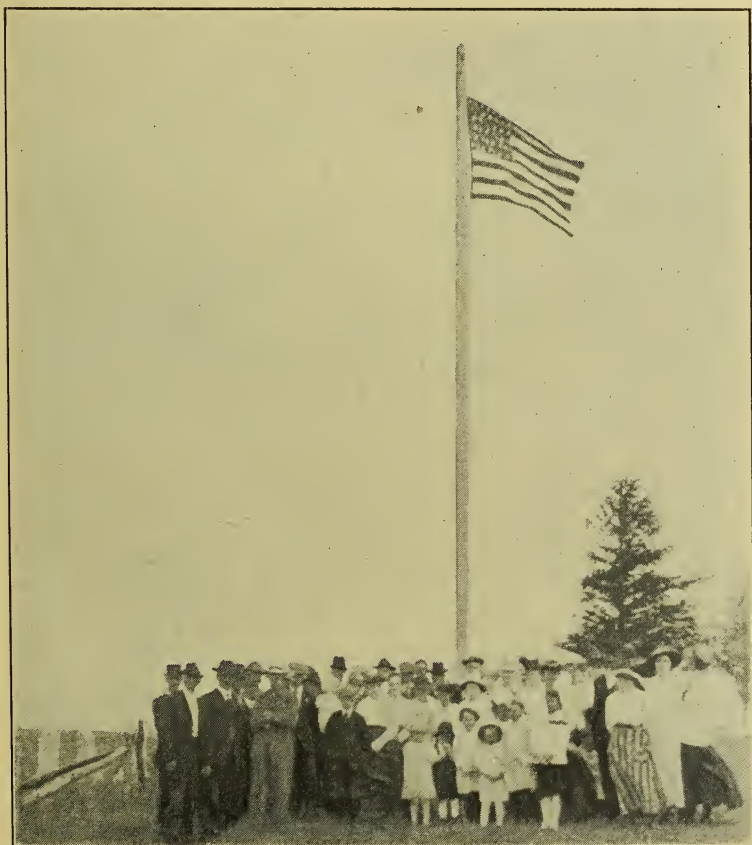


FIG. 9. A flag raising at the Mount Zion Open Country church, Atchison district. Brown county, Kansas.

One illustration of what a rural minister of the modern type should do in rural service will illustrate the type of work for which the modern rural church should stand everywhere. The Rev. M. A. Dauber, Pikes Creek, Pennsylvania, may be taken as typical of the rapidly increasing group of ministers of the modern type.

By announcing that he was not there essentially to administer the Methodist Episcopal discipline; by appealing to the common sense of the community people to support one live church instead of three dead ones, and by instituting a social program which compelled attendance at his church, he completely absorbed the other denomination which chose to close its doors, dispose of its property, and place its leading men on the Methodist official board.

Some of the plans which Mr. Dauber carried out in order to create interest in his church are: He directed home talent dramas; organized a farmer's association; established an agricultural experiment station; arranged stereopticon lectures, missionary talks, children's programs and Saturday night entertainments; coöperated with the county work in forming domestic science classes; directed athletics; planned patriotic drives; petitioned the state for better roads; ran a monthly magazine; developed local leadership, and fully equipped his churches.

Every Sunday Mr. Dauber conducted four services, two in the morning, one in the afternoon, and one in the evening. These four preaching points are in 100 square miles of territory, considered to be the hardest "charge" in the Annual Wyoming Conference.

All classes and all ages are drawn to Mr. Dauber's church. That was his aim and he has accomplished it. He credits his Saturday evening entertainments with the key to his success, for it is here that he has the opportunity to talk to his people about the services he has prepared for the next day. He does not make his church announcements obtrusive. The meetings are not entirely in his hands, for at the beginning of each year he appoints different people responsible for one Saturday night entertainment. As there seems to be an unlimited store of talent among his young people and a wealth of interest and enthusiasm, he claims the distinction of never repeating even the tiniest part of a performance. At first some of the older

church people prophesied that the "theatricals" would "send the church to smash," but their present minister has proved them to be wrong. They have put the church on its feet.

Fully eighty-six percent of the farmers on this charge are members of the farmers' association which Mr. Dauber has recently formulated. He works in conjunction with the farm bureau and the county agent, has placed an experiment station on the 45 acres of ground which he has taken over for the purpose of growing the best seed possible for his farmers, and



FIG. 10. The Mount Zion, Irving Chapel, Chautauqua, Brown county, puts on a varied program of entertainers and musicians which makes a real contribution to community education. These are Alpine yodlers.

he has enough seed ready to supply seventy-five percent of them. The program he has arranged for this organization includes bi-weekly meetings and lectures, pruning and spraying demonstrations, and fruit experiments. He was the only preacher at the meeting of 500 agriculturists held last March in Luzerne county, Pennsylvania.

At the request of this minister, women were sent from the state colleges to conduct classes in canning, dressmaking, and cooking among the women of his church.

When he found that there was little or no reading matter coming into the homes of his parishioners, he obtained a state library, which is exchanged every six months, and contains everything possible along the lines of education.

Because he is responsible for the work within 100 square miles, and he found no doctor or nurse in that territory, he immediately made a personal appeal to the state for a competent nurse, and has succeeded in gaining attention and the promise to consider his petition.

By gathering his people together in townships, Mr. Dauber showed them the importance of electing efficient school directors. The result is that the school period has been lengthened and more capable teachers are employed. Mr. Dauber has been granted permission to use the school grounds for tennis courts during the summer, and his personal direction of this

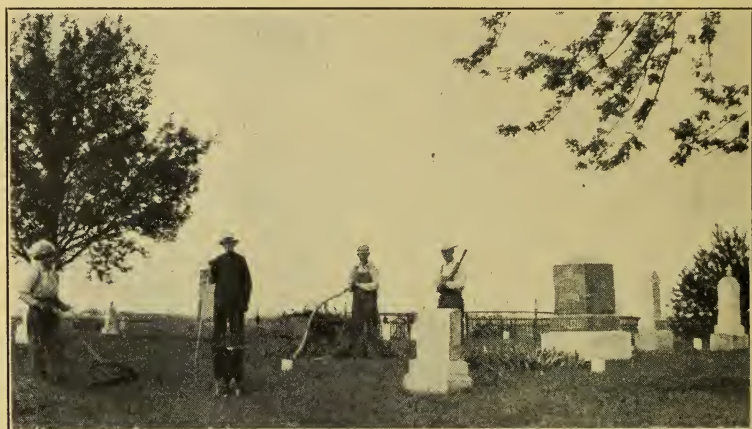


FIG. 11. The Mount Zion church, Brown county, rescued an open country burial ground from weeds and made it an object of community pride.

form of athletics has a distinct effect on the morale of the young people.

In all drives for the Red Cross, Y. M. C. A., and Liberty Loan, the entire community recognized the Methodist minister's powers of leadership and placed him in command.

"One of my biggest problems was the means of access to the city," said Mr. Dauber. "I took most of the leading farmers into court a year ago in regard to the opening of a state road. The state would not take over the old road, but the officials said if a new road was put through as planned, they would take it over and give us a macadamized road. We went into court in January and the judge made the decision that the road must be commenced in one week and worked at diligently. This was done and the road is now opened. We are now trying to elect

supervisors who understand their job and really want to give us good roads." Every project which Mr. Dauber has attempted has turned out a complete success.

The Methodist Episcopal Church in Atchison District (Kansas), comprising the counties of Atchison, Doniphan, Brown, Nemaha and in part of Marshall, Pottawatomie, Jackson, Jefferson, and Leavenworth, is taking a forward step in rural church work. The field has been covered by a preliminary survey and a map drawn showing the location of all churches and Sunday schools maintained by all the denominations, as well as the residences of established pastors. Steps are also being taken toward the organization of a rural ministers' association, which is expected to secure for each rural leader the advantages of mutual counsel and encouragement. One of the newest developments in this territory is the establishment of the new open-country circuit in Brown county, known as the Mt. Zion-Irving Chapel charge. This embraces two wide-awake churches—one in Irving township and the other on the state line near the Margrave ranch colony. Adjoining the Mt. Zion Church has been built a new parsonage of hollow tile and stucco, which cost \$3,500 and many days of donated labor and hauling—all materials entering into the building were hauled from Robinson, Hiawatha, or Padonia, distances of nine miles or more. This parsonage is modern in every way, containing eight rooms, bath, pantry, and two halls, with cellar, furnace and permanently installed range and cupboard. Cement sidewalks, barn, garage, cistern and chicken house, with plenty of garden and lawn space complete the home, all of which was paid for during the first year.

Sunday school, Epworth League, and Ladies' Aid organizations supplement the official board of the church in the desire and effort to maintain a community life that will contain all essentials of modern Christian culture. A five-day summer chautauqua has been maintained for two consecutive years, in which the two neighborhoods of the circuit coöperate. A cemetery association has been formed and chartered, whose efforts promise to maintain one of the most beautiful burial places in the county, displacing what is too often the most sadly neglected community institution. In the hopes of this progressive community are many advantages and facilities for development and pleasure. A rural high school will undoubt-

edly soon be secured. Farmers' institutes, canning clubs, lecture courses, and other community gatherings are in the program projected. With the habit of coöperative community planning and activity rapidly being learned, will come the securing to this and other neighborhoods in the district, as well as elsewhere in the state, that heritage of high privilege and development which is the right of all Kansas youth.

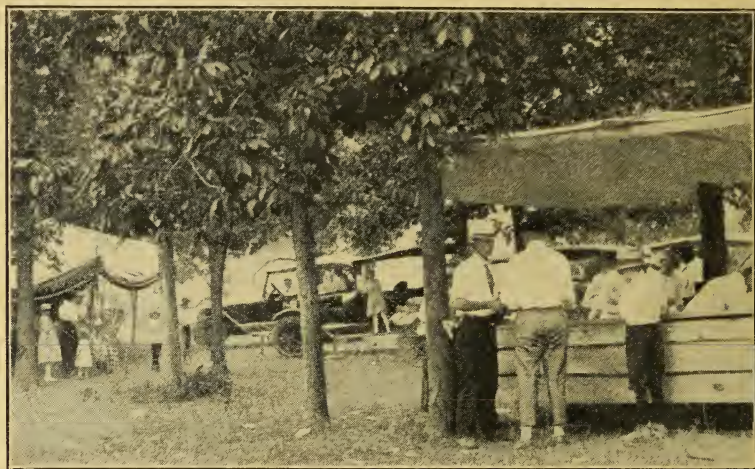


FIG. 12. The ladies' aid society of the Mount Zion church "kept stand" on the chautauqua grounds.

The state of Kansas is distinctively agricultural and the ministry has an opportunity for leadership in the advancement of rural culture in that state unexcelled in any other section of the country. The program demanded by the modern rural community has already been demonstrated over and over again in various parts of the country, with remarkable results in the improvement of the economic, social, educational, and spiritual life of our rural folk. Kansas rural churches should and will take a conspicuous place of leadership in the program for advancing the welfare of rural people.

THE RURAL Y. M. C. A

By CHAS. A. CASTER, state secretary for rural work, and HUGH McVEY, state chairman of boys' work, Y. M. C. A., both of Topeka.

KANSAS farm boys are all soon to enjoy the benefits of the Young Men's Christian Association. There are over 160,000 boys in Kansas and of them over 100,000 are on the farms. Many of them live in small towns where there are no Y. M. C. A. buildings. Probably not over 30,000 boys in the state can now be members of the Y. M. C. A., no matter how badly they want to be in this great institution.



FIG. 13. Young America—the hope of the future.

Most people think of a building where the letters "Y. M. C. A." come before their eyes, but as a matter of experience the building is but an incident. The house in which it lives is not the organization. Some of the most successful organizations are formed where there is no regular edifice nor even a specific meeting place.

Organized play and coöperation in religious work—the two chief aims at the Y. M. C. A.—is just as important in the country as in the city. As a matter of fact many farm boys never learn to play—baseball sometimes being their one accomplishment in physical training. It is true, the country boy does need as much exercise as others. Most of them think there is now too much physical exercise on the farm, yet play of the higher type aims to train the mind as well as the body. Because of the lack of such training the country boys are sometimes called "rubes" when they mingle with city boys. Their inability to fit themselves into the activities of the other young men who have received a fuller development handicaps them to a very large extent. Some country boys lose faith and

confidence under such conditions and give up—discouraged for life because of the lack of a little training.

Years ago the Y. M. C. A. began pushing its service out to the farm boy and changing somewhat its methods to fit the needs of rural environment. It changed its bookkeeping course to a corn club, and its free employment bureau listed farm hands instead of bookkeepers.

Because of the lack of knowledge of the Y. M. C. A. rural work and the great shortage of trained and skilled leaders, the progress has been slow. The first county to be organized for Y. M. C. A. work was Washington county in 1909. To-day Kan-



FIG. 14. These Marshall county boys are studying the Bible under their Y. M. C. A. leader.

sas has seven organized counties, including Washington, Marshall, Republic, Jackson, Marion, Pratt, and McPherson. In each of these counties the work is carried on by a county committee of representative farms, business, and professional men, working through a county secretary who gives his full time to development of the work with the young men and boys of the county. The work of these counties is supervised by the state executive committee with headquarters at Topeka. Charles A. Caster is the state secretary of the county work. The committee plans to divide the state into districts of ten counties each, and to employ district secretaries who will give their full time to developing the association work in the several districts. The first district secretary is to be employed not later than June 1, 1919, the second district secretary not later than October 1, and a third by January 1, 1920. Already the state committee has employed an associate county secretary, who is giv-

ing his whole time to developing the work in the fields already organized.

Any community or county desiring to have a county Y. M. C. A. should first correspond with the secretary of the county work department of the State Y. M. C. A., at Topeka, and invite him to come to that community. A meeting composed of representative Christian men can then be called and definite plans for the organization formulated. The permanent organization necessarily requires certain funds to carry on the work, and some provision for raising these funds must be made. The average county budget amounts to from \$3,000 to \$3,500 a year. This budget covers salary, traveling expenses,



FIG. 15. Organized play at a rural school. The Y. M. C. A. aims to develop all the children and not just a few "stars."

office rent, printing, postage, etc. The community served is expected to raise the funds.

As indicative of the appreciation for the work the Y. M. C. A. is doing for county boys the remarks of C. J. Brown of Marshall county are pertinent: "The county Y. M. C. A. was inaugurated in Marshall county eight years ago, Marshall being one of the pioneer counties in this work in Kansas. We had no precedents to go by and the experimental stage had to be worked out here. . . . Now, at the end of eight years the county Y. M. C. A. has gained the confidence and support of the entire community. Our business interests would not spare it. It stands as a permanent and necessary force and influence for the conservation of our boyhood."

Another testimonial is that of E. D. Woodburn of Jackson county: "Jackson county has been organized four years and

we are satisfied that it is the most important agency we have found for the uplift of boyhood. Our fourth annual "Older Boys' Conference" has just closed. Two-thirds of the boys present made some decision regarding better living, and we are justly proud. It is my opinion that the county work is soon to be recognized as one of the greatest builders of boyhood and future manhood that the Y. M. C. A. or any other organization has ever undertaken."

Even our illustrious Theodore Roosevelt was a strong supporter of county Y. M. C. A. work. He said: "I invite your attention to what the Country Life Commission of the United States says of the country church and the need of an extension of such work as that of the Young Men's Christian Asso-



FIG. 16. Patriotism as taught the country boy by the Y. M. C. A. This is a flag raising at a camp in Republic county.

ciation in country communities. There should be a large extension of the work of the Young Men's Christian Association into the rural communities. There is apparently no other way to grip the hearts and lives of boys and young men of the average country neighborhood. This association must regard itself as an ally of the church, with a special function and a special field."

In a certain small town a gang of boys was organized for Y. M. C. A. work with a good live leader. Among those boys was one who was typical of many of our Kansas farm boys of to-day. He objected to carrying in wood and water and was short and cross with his mother when asked to do those things, allowing her to carry the heavy end of the work under all the hard conditions that come on the farm. When she insisted that he do his part he was sullen and grouchy. Through the the gang influence he followed the crowd and joined the Y. M. C. A.

group. Some three months later the organization found it necessary to put on a campaign for funds and launched the campaign with a big "Father and Son" banquet, which was conducted by the boys. At this banquet the chairman of the county committee outlined the plans of the work in the county and what they were trying to do. In casually looking over his audience he mentally noted the seeming prospects. Back in the corner sat a typical, grizzly-bearded farmer, of forbidding aspect. The chairman said to himself, "There is one man who will not give a dollar." To his surprise at the close of the meeting this man walked directly to him and said, "Here is



FIG. 17. The Y. M. C. A. takes part in all the activities of the rural community. Boys' and Girls' club work is one of the features receiving attention. These boys are members of a corn club at the State Y. M. C. A. camp at Elmdale, Kan.

\$10 for your work. I came all the way to-night, through the rain, to find out what kind of an organization you have in this county. It has absolutely changed my boy from a disagreeable, disobedient youngster into a boy who is thoughtful and attentive and willing to do his share of the duties at home. You have satisfied me to-night that your organization has back of it the forces that can change boy life. You can count on me for support from now on." This was the father of the boy who hated to bring in the wood. Such instances are common in work of this kind and there is necessary only the opportunity to demonstrate the wonderful effect on the character and habits of boys which work of this kind will have.

The rural Y. M. C. A. movement does not come to the farming country as a new organization, promoting new ideas, but as

a coöperating, unifying agency. It purposes to coöperate with the home, the church, the school, and the local authorities, and to help them function in the best possible way. It attempts to vitalize all of the community activities by discovering, enlisting, and training leaders of life in the various communities which make up the county. It takes as one of its basic principles that the redemptive and readjustment forces of any community are already resident in that community and only need to be discovered, supported and trained.

One of its first duties is to coöperate with the rural school, which is paramount in many Kansas counties. It endeavors to link its work into that of the Farm Bureau, if there is one, and



FIG. 18. Learning to swim under supervision. This attracts the boys.

in many places where there is none it assumes some of such a bureau's work. It works with the coöperative associations, the Grange, the other local associations, and especially with the boys' and girls' club work, many times being the center of this important activity.

The organization plan is to have a county committee made up of representative men of high character from the different parts of the county, who are interested in the best development of boy life, and in promoting the welfare of young men. This committee has general charge of the work in that county. They raise the budget which is necessary to carry on the work, employ a county secretary, who gives his entire time to extending the work to the various communities of the county. The county secretary organizes local committees in each town or township, through which the association may coöperate with the home, the church, and the school.

Local associations, under the general county organization, promote the self-governing, organized groups of boys, young men, and men, with the strongest adult leaders of the community. The work with these groups is based on a four-fold program—physical, educational, devotional, and service. The *physical* work is along the line of health talks, group games, personal hygiene, talks on sex life, etc. The *educational* work is along the line of parliamentary practice, practical talks by different business and professional men, debates, nature study, woodcraft, scouting, etc. The *devotional* work encourages boys to attend church and Sunday school, directs Bible Study groups,



FIG. 19. The Y. M. C. A. puts on pageants in costume. Marion county, Kansas.

and promotes clean living. It intends to interpret the boy's life in terms of the high ideals as illustrated by the life of leading characters of the Bible. The *service* work is teaching the boys to become leaders of other boys, to promote clean habits, clean speech, and clean living, to direct play, to be useful and helpful in their home and duties. In many communities the attitude of the boys toward home duties and community affairs in general has been entirely changed by the work of the rural Y. M. C. A.

This local Y. M. C. A. also promotes community-wide activities, such as making a survey of the community to determine how many boys are in school, how many have dropped out, and why; how many boys are in church, how many have dropped out, and why; what boys have left the farm; and to determine the things in the community that help or hinder natural growth

and development. It also promotes community socials or "sings"; "Fathers and Sons" banquets; work with returned soldiers and sailors; community fairs; play days, etc. In all of these things the rural Y. M. C. A. coöperates with the other agencies at work in the field.

The secretaries are trained men provided by the state office and the school at Estes Park, or other training camps. Particularly are they selected to help the school teachers promote character-building influence on the playground. A system of organized play has been worked out whereby school boys are divided into classes according to their weight, and in that way the younger boys have an opportunity to compete with boys of their own class. The system is graded so that a boy has a chance to compete against his own record and to make his grade in play the same as he does in school. In this way every boy in school can be interested in play. Instead of developing a few "stars," every boy in school gets the physical development to which he is entitled. The trained secretary carries this work through the counties by going into different schools and demonstrating games and explaining the system; by going to the county institute and illustrating to the teachers the possibilities of this method of play. In many communities the rural Y. M. C. A. has promoted community fairs or community picnics in connection with the play days at the schools, and it has not been uncommon for one hundred or more people to come out and have a picnic dinner on a level tract of ground near the country schoolhouse, and to watch different games during the day.

Most county secretaries promote annually a boys' camp, to which from twenty to one hundred boys go, with an adult leader for every five boys. In this way the association helps to give the boys an outing under proper supervision. Every boy desires to get next to nature and to rough it, and when this is properly supervised it is one of the greatest character-building periods of a boy's life.

Probably the most far-reaching feature of the county work is the older boys' conferences which are held each year in the organized counties. They bring together the leading boys of the county, with the strongest leaders that can be obtained on different phases of boy life. At these conferences the boys discuss among themselves the problems of their community and

what they can do to solve them, and how they can better co-operate with the other forces in making their community the best possible place in which to live.

The chief task of the county Y. M. C. A. is the finding, listing, and training of leaders. It coöperates with the church in this matter by assisting in finding teachers for boys' classes in the Sunday school and leaders for definite church work.



FIG. 20. A community picnic under Y. M. C. A. auspices. It is not uncommon to have 100 or more people in attendance.

This is done through its leaders' training conference through encouraging the older boys to attend the high-school religious training camp, the state older boys' conference, the state Sunday school convention, and other conferences and conventions where a constructive program is given, which brings them in touch with the higher ideals and the desire to serve in their own home community.

ORNAMENTAL PLANTING FOR KANSAS HOMES.

By M. F. AHEARN, Horticulturist, Kansas State Agricultural College, Manhattan.

VERY little interest has been taken in this branch of agriculture until recent years. Men were too engrossed in the search for riches and therefore paid little attention to the ornamentation of the home grounds. A marked advance has been noticeable during the last ten years and nearly every town of any size now boasts of its civic improvement clubs who are doing a great deal for our city homes. The rural districts are expending money for landscaping school grounds and members of rural communities are striving to beautify their places in the country. We believe that one way to keep the boy on the

farm is to make the surroundings more attractive than those of the city residences. To spend ten thousand dollars on the building does not seem extravagant, but to spend a one-hundredth part of that amount on the grounds is often considered prodigal. Until the property owner realizes that in planting his grounds he is increasing the value of his property, just so long will there be unsightly places.

It is perhaps needless to point out the many advantages of planting some shade trees and ornamental shrubs on the Kansas farm, but a short review should not be out of place. Certain results must necessarily follow the proper planting of orna-

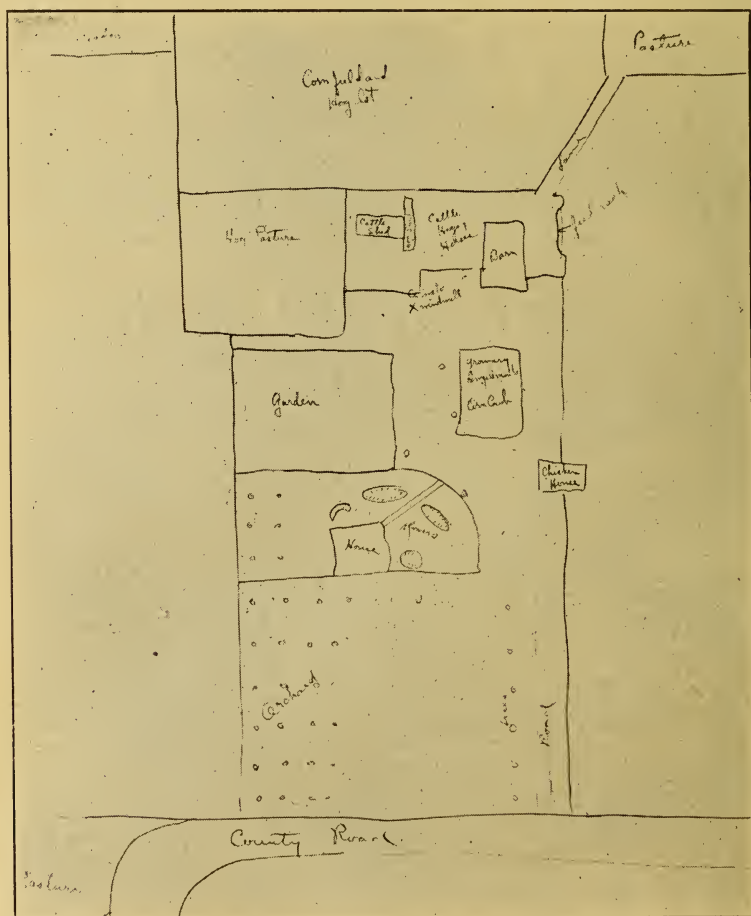


FIG. 21. A plan sent to the landscape department of the Kansas State Agricultural College for advice and revision.

mentals. First there is an increase in the value of the property and secondly the living conditions are made more pleasant and more healthy. Add to this list comfort, satisfaction, contentment, and the fact that trees and shrubs add to the beauty of the surrounding country, and the most skeptical person is compelled to admit that there are good reasons for doing a little landscape work on the home grounds. Each year brings an increased interest in this line of work and to-day we have farm homes that rival, and in some cases, surpass the best planted city homes. The country lends itself naturally to ornamental plantings and at a comparatively small outlay of money re-

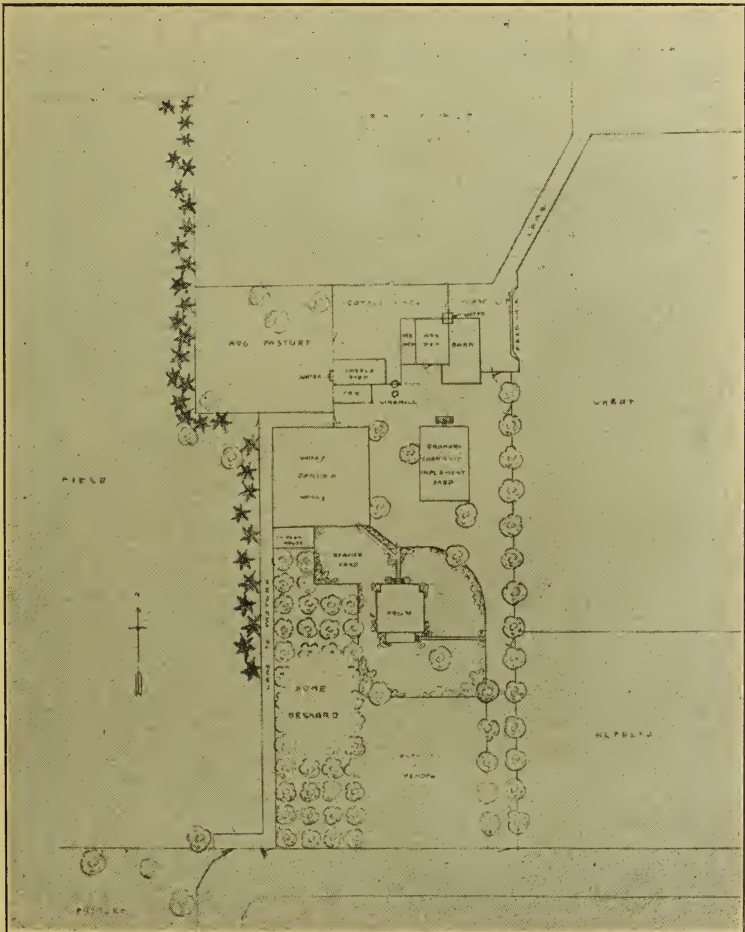


FIG. 22. This is the plan shown in Figure 21, after revision.

sults may be obtained that will surprise and gratify the owner of the place.

To secure the best results a planting plan should be made showing the location of every tree and shrub on the place. This is advisable for several reasons, not the least important of which is the record of the varieties which have been selected for certain locations. With such a memorandum at hand it is an easy matter to replace, provided trees or shrubs need to be replaced. There is a right and wrong way to plant the home grounds and before attempting any planting on a large scale it is well to write your experiment station or some other recognized source of information for instructions. The following suggestions are given with the hope that they may prove helpful to the farm owner who is desirous of beautifying the landscape about his home.

The grounds should be planned with as much care as the house or other buildings. Before making a working plan there must be a decision in regard to the treatment, *i. e.*, whether it will be formal or natural. No iron-clad rules can be laid down for guidance in this selection as each place will present conditions peculiar to itself and it is therefore necessary to choose the style that will fit the subject. In general, the formal style will prove better for small areas and the natural will prove more advantageous for large estates. This plan should record the size of the area to be landscaped, the location and size of buildings, walks, and drives, and the exact position of each tree, shrub, vine, in fact, every plant that is expected to remain in any one place for a number of years. In formulating the plan, be governed largely by soil and climatic conditions, the surroundings, exterior views, such as a body of water, a fountain, etc., and any particular situations in the contour of the surface that may be taken advantage of in the general scheme. Having, after mature deliberation and careful study accepted a plan, it should be adhered to in every detail and only changed when during its application, circumstances arise over which the designer has no control.

There are two great styles, formal and natural. The formal style is popular and brought to its greatest perfection in Italy. Walks and drives are laid out in straight lines, trees planted in rows and clipped in odd and grotesque forms, flower beds are laid out in geometrical figures; statues, porticos,

balustrades, pergolas, etc., are used extensively, and ornamental fences or clipped hedges surround the grounds.

The natural style is more popular in this country. It is an attempt to imitate nature in so far as possible. Walks and drives are curved, open lawns secured, trees are grouped, shrubs planted in masses, fences are dispensed with whenever possible, and statuary and artificial designs are entirely out of place.

For city or town lots, use the formal style. Very little planting can be accomplished and whatever planting is done should be kept to the rear or set out along the border. A few shrubs may be planted in the angles of the building and vines should be allowed to climb over the porches. The smallest composition is often the most difficult to design and requires fine judgment and good taste.

Large suburban homes and country places afford a splendid opportunity for the development of the natural style. The area being large permits of a pleasing variety of design. It is possible to have a small body of water, create groves, secure large groups of trees and shrubs and still maintain an open lawn. To attempt the formal treatment of large estates would require the lavish expenditure of funds that would soon impoverish the owner.

Place walks and drives where they are needed and have them direct. Curved walks and drives are more artistic, but there should be a good reason for these curves. When should the walk be straight and when should the curve be used? Make this a general rule: Go from one point to the other in the easiest and most natural way. If a straight walk answers the purpose best then it should be straight and if a curved walk seems to be the solution use the curve. Walks adjacent to the building may be made of cement, stone or brick. Large estates are often provided with long shady walks through the grounds and away from the buildings, made of gravel, grass sod, tan bark, etc. The width of walks and drives should be governed by the traffic. Avoid the error of making more walks than are absolutely necessary. They should be constructed with the utilitarian, rather than the ornamental purpose in view.

One of the most valuable adjuncts to the home is a well-kept greensward. Eternal vigilance is the price of a beautiful

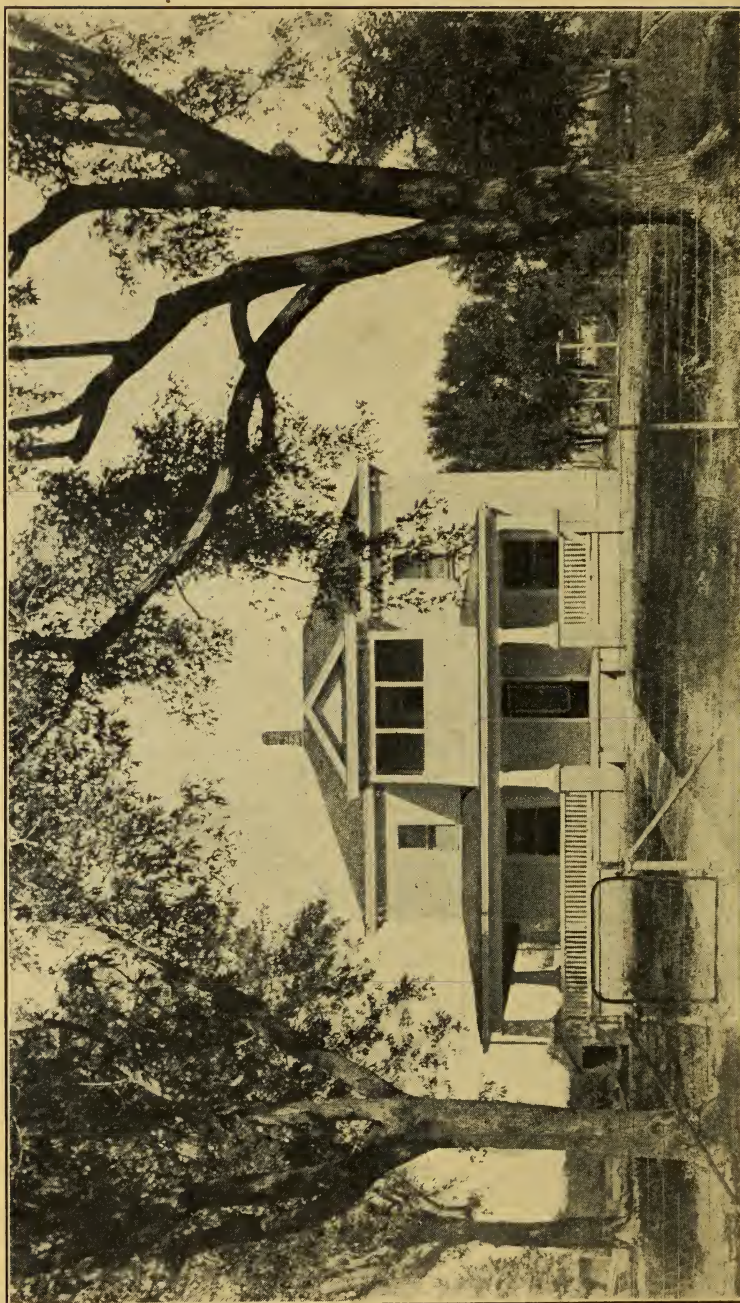


FIG. 23. This picture illustrates how a few trees and a lawn add to the appearance of a farm house. It could be considerably improved by the planting of shrubs at the base of the foundation and at the sides of the lawn.

lawn. Secure good rich soil, for the top layer at least, even though it will be necessary to haul it from a distance. Select a grass that is adapted to soil and climatic conditions. On heavy soils such as are generally found in the north and middle west the handsome Kentucky blue grass will produce a luxuriant carpet of green. Farther south, substitute Bermuda grass or white clover. Lawn mixture must be looked upon with suspicion as the period of germination and the texture and color of leaf may be very different. A good combination may be obtained by mixing blue grass and redtop. Keep the grass trimmed, the object being to get a lawn and not a hay field. Watering is imperative in some sections and should be applied in an intelligent manner. Spraying the grass lightly does no good and is positively injurious, as it brings the young roots close to the surface where they are very apt to be injured by drying out. Water thoroughly when necessary and apply late in the day. Dispense with the frequent light sprinklings. Under certain conditions, it will be found advisable to use sub-irrigation.

Probably the most important feature in the beautifying of the home grounds is the proper selection and arrangement of the different plants. It is a problem calling for skill, experience, and sound judgment. The artist should have a mind picture of how the estate is going to look twenty, thirty, and fifty years after its conception. For small areas select trees of upright habit of growth such as pin oaks, hard maples, spruces and junipers. Set out a few shrubs like the purple fringe bush, Japanese barberries, Siberian pea, and some of the spireas. Do not make the mistake of planting too many specimens in the lawn as it makes the ground appear smaller than is really the fact. Work for an open lawn in front of the residence and whenever possible send the drives to the side and rear of the dwelling house. Where the acreage set aside for ornamental purposes is large, group trees of the same variety, as, for instance, have a group of white oaks, then a number of willows, etc., and the same system with shrubs and hardy perennials. The house being the principal feature in the landscape, all plantings on large and small estates must be done with reference to its position and style of architecture. Provide vistas that will furnish pleasing outlooks. Plant rare and beautiful specimens in the foreground. Screen all unsightly objects and

take advantage of all exterior views that are possessed of charms that would endear them to the lovers of nature.

Massed plantings will give the best effects but there are many plants that are only able to show their excellence when used as individuals on the lawn. A few shrubs placed at the foundation of the building will unite the structure with the grounds. Hardy vines clambering over the porch or scaling the side walls will produce the same effect to a greater degree. Flowering plants and those with ornamental foliage if used judiciously will add their full quota of beauty to the general arrangement, but under no circumstances should flower beds be placed in the center of the lawn. For two or three months they may be beautiful, but the rest of the year there is an ugly scar in the landscape. Plant them close to the foundation of buildings along the boundaries or in the back yard. To secure privacy or for the purpose of protection from stray animals, use a hedge instead of a fence. A charming plant for this purpose in climates where it does not winter kill is the California Privet. An evergreen hedge that will prove effective can be secured by using red cedar, Chinese arbor-vitæ, or the fragrant bush, honeysuckle.

Choose only hardy trees and shrubs that have been tried in your locality. Do not buy a tree because it is written up in glowing terms in a seed catalog for many of the finest trees offered for sale grow better on paper than they do in the Kansas soils. Reliable nursery concerns are found in Kansas as well as in some eastern or northern state, and the home dealer understands the climatic and soil conditions better than the foreign dealer. On the upland farm grow elms, hackberries, Russian olives, etc., and do not attempt to get a start of magnolia or sugar maple. In many parts of the state quite a variety of trees may be grown including the soft maple and the magnolia, but it will pay the farmer to stick to the hardy varieties. Native trees and shrubs may be used to good advantage and are easily obtained. Include a few evergreens in the planting plan as they possess great value for winter landscape. The Austrian pine, the red cedar, Chinese Arbor-vitæ and the Scotch pine are hardy for a variety of locations and will add beauty to any group of ornamental plants. Shrubs suitable for nearly every location may be found in the nurseryman's catalog. Some of these thrive in a high dry place,

others will grow in low, wet locations. Many shrubs succeed in bright sunlight while a few will grow under the shade of other trees. The uses to which shrubs may be put are legion; foundation planting, hedge planting to hide unsightly objects and to border walks and drives, they are inexpensive, effective, and of easy culture.

Under the head of care of grounds may be mentioned pruning, cutting the grass, fertilizing, up-keep of roads and walks, cultivation, and watering. All papers and other litter should be removed. Keep the grounds as neat as the housewife keeps



FIG. 24. An excellent farm house, but wholly without planting. Its value would be greatly increased were it surrounded with trees, shrubs, and grass. Compare it with Fig. 23.

the house inside and the home place will be a source of much joy and satisfaction to the owner.

The two accompanying drawings (Figs. 21 and 22) illustrate some of the problems that are pertinent to farm homes when attempting to beautify the grounds and arrange buildings for convenience. Fig. 21 is a picture which was sent to the landscape department of the State Agricultural College for suggestions regarding the beautifying of grounds and the arrangement of buildings. Fig. 22 is the design sent to the farmer after it had been worked over by the landscape gardener. A mere glance at this illustration will suffice to show that the suggested plan will materially help the ornamental

features of the landscape and a second glance will inform the most unobserving person that gates have been placed where they will be the most convenient and buildings have been grouped for utility as well as for beauty of arrangement. Sufficient space has been fenced for the lawn proper and the remaining ground has been put in alfalfa. The windbreak of evergreens protects the buildings and feed lot and the orchard; garden and poultry house are in easy reach of the residence.

Two of the illustrations of farm homes show two distinct types. Both of them are found in Kansas. Fig. 23 shows the farm home shaded and framed by three large trees, but it lacks planting close to the foundation of the house, which would be of assistance in bringing about a union of the building with the surrounding grounds. Fig. 24 shows a fine farm house, but there has been no planting about it, whatever.

AGRICULTURAL ECONOMICS.

FARM TENANCY.

By CHAS. H. TAYLOR, farmer, and member of the State Board of Agriculture,
Valley Falls.

AS successful agriculture occupies such a large and useful position in the life of the nation and of all the industries of the nation, both in time of peace and in time of war, agriculture is of interest to all at all times. At present a grave danger confronts us; namely, the decrease and wastage of the fertility of our soils, which is in no small degree associated with our system of farm tenancy. This danger has been recognized by some of our people for many years. Annually the danger becomes greater and is recognized by more people. A few governors have recommended legislation to check certain phases of the evil, but as a whole, little has been done. The trouble is that our soils have been farmed without returning organic matter as fast as it is used and the available supply of nitrogen, phosphorus, and potash has become so low as to prohibit satisfactory yields.

Soil experiments in general have shown that the wisest course is to use a rotation of crops, keeping at least one-fourth of the land in legumes, feeding the crops as much as possible, and returning the manure to the soil. If potash and phosphorus are present in sufficient quantities, this will solve the whole problem. The system has proven to be valuable in decreasing the damage of both drouth and flood. On the fertile farm, in a favorable year, producing crops is largely a matter of sowing and reaping—a maximum of physical effort directed over a large acreage with a minimum of mental effort. If crops are to be produced continuously for a long series of years, seeding and harvesting will continue and in addition the work of keeping up soil fertility must be looked after. Keeping up soil fertility requires more intelligent management and more labor per acre. In this country the pioneer farmer has worked the system of merely sowing and reaping so long that 40 percent of the original fertility of the soil is gone, and the farmer of to-day

must work strenuously for years before he can return the soil to that high plane from which it has been dragged.

Farm tenancy has occupied much space in agricultural writings and much time in agricultural programs. It has appeared in political programs. But despite all this we have one of the worst, if not the worst, tenancy system on earth. The evils of our tenancy system fall principally under these three heads, of which by far the most important is that it wastes most rapidly the fertility of the soil. Thirty-seven percent of the soil of our country is farmed by tenants and in almost every case the fertility of the rented place is noticeably less than that of surrounding farms, and the longer the place has been rented the poorer it has become. Matters have become so bad that there is a loud cry from the tenant that the land is too poor to make a living on and pay the rent. He puts in as much or more labor per acre than is required on good ground where the yield is 100 percent greater. At present prices of feeds and labor it costs approximately \$20 to produce an acre of corn and at present prices of grain about 15 bushels of corn are required to cover the cost of production. If the yield is 50 or 60 bushels, the profits are large, the newspapers feature the matter, and the city man thinks the farmer a rank profiteer. As a matter of fact no neighborhood averages such yields and much of the poorer land (which includes most of that farmed by tenants) averages so low that even with the present high prices the crop fails to pay expenses to the tenant. Under these circumstances he quits farming and goes to town, though whatever is produced tends to increase the supply of food and so decrease the cost to the consumer. Decreasing fertility of farms has been one of the strong reasons for migration to the city, and for increases in the cost of living.

Many landlords have owned land for years and managed it in a way that did not pay taxes and interest on the investment. They continued to hold the farm because the advance in the price of land covered loss in operation and still left a profit. They were gaining individually on account of the speculative value of land, but society was suffering from their operations. Some landlords have looked upon the farm as a producing plant and have laid wise plans for cropping and for keeping up soil fertility. They have equipped their places so they could secure the best of tenants. In the main such farms pay good profits

annually to both landlord and tenant and increase in value, too, faster than does the farm that is being held purely as an investment. Against this better and wiser class of landlord society cannot bring the charge that he is wasting that public utility known as soil fertility.

The five- or ten-year lease has been urged as a means of improving tenancy conditions. If the tenant were assured that he could stay for years, he could raise more stock and sow more clover and alfalfa. The plan is good, but how shall we get it to work? Few landowners wish to tie their place up for ten years; they may want to sell. If they are willing to lease for a long period they surely will not do so except to some man they know as thoroughly honest and competent. By the time the tenant has advanced to the place where he has gained this reputation he has often saved up enough that he would rather not contract for a long period, as he may have a chance to buy before the contract expires. However, if the farm that is offered has good improvements and is productive, he may take it. He certainly will not contract to take a poor place and build it up for the owner, for he can secure good places on a one-year contract and make more money for himself. Thus the long lease might keep up the better farms, provided proper methods were adopted and the two parties concerned could agree in business. Until human nature undergoes a very radical change it would not build up the poor places. In all kinds of business the owner is the one who must make repairs and put the plant in such condition that it can compete with others turning out similar goods. Applying this principle to farm tenancy the owner of the infertile farm must adopt a cropping and fertilizing system that will build up the fertility. He may do this work himself, hire it done, or give the tenant a larger share of the crops until such time as yields justify a return to customary shares of the crops.

The second great evil of tenancy is the depressing effect that it has on the tenant, tending to lower his citizenship. A large percent of our tenants move every year and few remain more than three years on the same place. The good tenant may move because he gets a better place offered to him; because the rent has raised, or the place has been sold, or leased to some relative of the owner. The poor tenant may leave by compulsion or by mutual consent. In all cases the tenant comes to a

new place as a stranger and temporary resident, and so takes less interest in roads, schools, churches and neighbors than he otherwise would. In return the neighbors make less effort to draw him into their individual life and their community life than they would if they considered him a permanent neighbor. He will make a few home conveniences and those which are made will be of a temporary nature. The first year he cannot farm the place as efficiently as he can after becoming acquainted with it. After crops are tended, he will be idle unless work in the neighborhood is plentiful. No matter whether he is a superior or an ordinary citizen, years of such experience cannot fail to leave a detrimental mark on the man and his family.

The third objection to tenancy is its great waste of labor in the annual first-of-March moving. In moving hard work that represents no advancement is inevitable, sickness often follows, and teams are often pulled in the mud until they do not regain vitality for the spring work. The same amount of labor and expense directed toward the making of concrete walks, water systems, etc., would equip a farm in a very few years.

Several of the complaints regularly made against tenancy should be checked up against the business methods of the two contracting parties. The drama and the farce are curiously mingled in many of these leases. The man who owns some wornout acres, well seeded to sunflowers, Jimson, cockleburs, and most of the other undesirables known, makes a contract with a man who never raised a good crop and has neither the equipment nor the inclination to do so, and each knows that the contract will not be fulfilled. The owner calls it a first-class farm. The tenant agrees to cultivate the place in a first-class manner, keep down all weeds, and keep up repairs. Usually the pair keep about even. Tenancy should not be blamed for what occurs under a business contract in which one or both parties prove to be scoundrels.

Some foreign countries have tenancy systems that are satisfactory to landlord, tenant, and society, and some men in America have systems satisfactory to all concerned. England has a tenancy system that has stood for ages with little criticism concerning its effect on the soil. There much of the land is farmed by tenants, fertility is maintained, and the lease stays in the hands of the same family for generations. The

tenant is by law permitted to buy fertilizers and make improvements for conducting the business without asking the landlord's consent, charging all expenses to the landlord. This applies to the class of fertilizers and improvements that are conceded to be necessary. Before erecting other improvements he must get the landlord's consent. If he puts into the place improvements either in buildings or in fertility for which he pays from his own pocket, the landlord must reimburse him for them before he can take away the lease.

In New Zealand the tenancy question is handled satisfactorily entirely by the system of taxation. The acreage which one man can farm with his own labor takes a basic rate of taxation, and this rate increases rapidly with increased acreage held, so that holding a large acreage becomes impossible. In New Zealand tenancy is almost unheard of.

In looking about this country we find some men using systems that maintain the fertility of the soil and give good returns to both partners, so to them we turn for guidance. Their success is due to their correct contracts, to their personal ability, or to both, so we will note these items carefully.

A Lee Summit, Missouri, man owns a well-equipped stock farm, stocked with high-class cattle and hogs. Having employed as farm manager a man who showed marked efficiency, he contracted to keep him at the same salary, plus half the net returns from the place.

A Kansas City banker was working his farm unsatisfactorily with hired help, tried renting it with like results, and then made a five-year partnership lease that has proven satisfactory. This lease was made with a man who had been working it for him and had made good at the farming business. The tenant purchased half the stock, implements, and feed; the expense of purchasing extra feed, seed, labor, etc., is shared equally; and returns are divided equally. The interest on the owner's investment in the farm is accounted to be worth the tenant's labor and ability as manager. So the more valuable the farm from its producing standpoint the better the manager it should be possible to secure. Inasmuch as many landowners have practically the same contract, except that the tenant owns all of the implements and furnishes all of the labor, this may seem unfair to this landlord. However, this is a dairy farm, while under those other contracts, the places are operated as grain,

hog, or beef farms, or a combination of these. In truck farming and in dairying the tenant cannot do all of the labor and divide the profits equally, and the more the product is worked into its final form and distributed to the ultimate consumer the greater the injustice to the tenant who furnishes all the labor. On the large place, representing a large interest on investment, the landlord would, of course, prefer a manager who had children large enough to help with the work.

Another conspicuous example is that of a Des Moines, Iowa, man who comes of a family who have been renting good Iowa land for the past 50 years. He has a thousand acres with excellent equipment, tile drained, and heavily fertilized with potash and phosphorus where needed. He takes as tenants only men of excellent farm experience, who own good implements and plenty of heavy work horses. His tenants stay with him only a few years and leave to go to a farm they have paid for. He has no trouble getting new residents, for men of these requirements are always waiting for his place.

One eastern Kansas man has established on his farm a five-year rotation of corn two years, wheat one year, clover hay one year, and timothy-clover pasture. He gets as rent half of the grain. If the tenant uses all of the hay and pasture and returns the manure the landlord receives no share of the crops; if they are sold, the landlord gets half. The place is increasing in fertility and both parties are satisfied. No better way of encouraging the tenant to keep up the fertility of the place has come to my notice.

Success in any manufacturing business depends upon the efficiency of the plant, equipment with good tools, suitable terms of contract, the quality of management and labor, and the coöperative spirit on the part of both owner and workman. In most cases the owner makes the general plans for running the plant successfully and in all cases he looks after its maintenance. If he is a wise manager he adopts some device whereby the good ideas of the workman are secured and their loyalty retained by financial rewards. This is usually brought about by giving the workman a share in the profits. All of these principles operate in farm tenancy. The good farm, the good tenant, with good tools, and the good contracts, make success. Lack of any one of these may spoil the whole thing. The landlord is the one in position to adopt a good rotation;

the tenant can do so only when he is assured of a long contract at the close of which he shall receive pay for improvements, including buildings, fertilizers, etc., furnished and left by him for his successors.

Landlords may find some of the methods given applicable to their needs. However, the tenancy problem is not merely an academic problem for the farmer, it is economic and political, and as such directly affects the city population. With 40 percent of the native fertility gone, 37 percent of land farmed by tenants, 33.6 percent of the land mortgaged, and possibly less than 25 percent of the voters of the country living on the farm, it is clear that help is needed and that the city must help save the farm or we shall all go down together.

Some of the important legislative measures to be recommended are:

1. Higher rate of taxation if cropping system is destructive, or lower rate for one that is constructive.

2. Before landlord can compel tenant to give possession he shall pay tenant for fertility and necessary improvements that the tenant puts on the place and does not use up—value of such improvements to be determined by appraisers.

3. Encouragement of farm ownership by failure to tax indebtedness on a farm the size that one man can work properly.

4. Encouragement of farm ownership by liberal long-time state or national loans, provided approved cropping system is adopted, only men of approved farm experience being eligible.

COST OF PRODUCTION IN RELATION TO PROFITS.

By ANDREW BOSS, chief of Division of Agronomy and Farm Management,
University of Minnesota.

THERE is a very prevalent impression among both business men and farmers that the profits from farming are low. This has been reflected in various farm survey bulletins which indicate that the average income of the farmer is approximately that of a good hired man, and in studies of returns on money invested in land which show that only 2½ to 4 percent interest is made on the investment. There are numerous other indications that the profits from farming in the past have been not very large. It is reflected by the lack of farm implements in many places. It is also reflected in the

lack of equipment for the modern farm home. What are regarded as the comforts of life are meagre in many of these and absent altogether in others. Farmers have been handicapped also by a shortage of capital for equipping and operating the farm. Unimproved farm lands are in evidence in many places and the lack of improvement is due very largely to the fact that the returns have been so small that the farmer did not feel warranted in making them.

It is hardly safe to assume that every farmer, if he had plenty of money, would spend the money in improving his farm and in providing better living conditions for his family, but it is safe to say that many farmers would be very glad indeed to spend money in educating their families and in improving the living conditions in the country if the business in which they are engaged were paying a reasonable profit.

INCREASING PROFITS FROM FARMING.

There are only a few ways in which the profits from farming can be increased. Without doubt they can be increased by better management, and that is the advice usually given by people who live in the cities and who know little of the farmer or of the conditions under which he lives. But of what better management consists these people have little to say. A close analysis of this question of better management suggests only a few ways in which profits can be increased. The first one in the mind of most people is by increasing production. Many assume that high yields only are essential to profits. It is true that high yields are a big factor in securing profits, but it is also true that they are a factor in producing profits only when the high yields are obtained at a comparatively low cost. It must be recognized that certain yields can be obtained without great intensity. If, however, the average yield is to be greatly increased it means that the cost of production per acre or per bushel must be increased because it will be due either to the application of fertilizer or to better tillage of the land. The last bushel per acre on a high yield of crop is often produced at a loss because the labor involved or the fertilizer required for producing this extra last bushel has cost more than the bushel is worth. The principle that should govern an increase in production is this: It is wise to increase the yield only when it can be done at little expense and when returns promise to be greater than the expense.



FIG. 25. One man with three horses doing as much as two men with two horses each. The labor saved reduces the cost of producing corn.

Another way of increasing the profits from farming would be to secure an extra price when selling. On many of the farm products this can be done, as is well illustrated in the sale of well-fatted livestock or in the sale of pure-bred animals that have good records of production back of them. There are some who think that the selling price can be increased by limiting production, and no doubt the quantity available always does govern the price, but with a large world supply of a commodity, it would be impossible for a group of farmers to increase the selling price by holding their product off the market. The other way to increase the selling price is by creating a demand for the product in question. This also can be applied only in a limited way and to a few localities and certain products. There is room also for improvement in quality and in the way in which an article is prepared for the market, which will give added profits from a crop or product. But none of these methods, valuable as they may be on certain occasions, can be applied in a large way to the matter of increasing the profits

from farming. Large production is essential to profits and a good selling price is essential to profits, but both will fail under certain conditions.

A third way of increasing the profits is by reducing the cost of production. At least fair yields with the product sold at a fair price is a good start toward profits, but it stands to reason that the one who can make the greatest profit under such conditions is the one who produces for the least cost. It is in this connection that a study of the cost of production becomes extremely valuable. By knowing what it has cost to produce and whether or not a crop is bringing more than it cost to produce

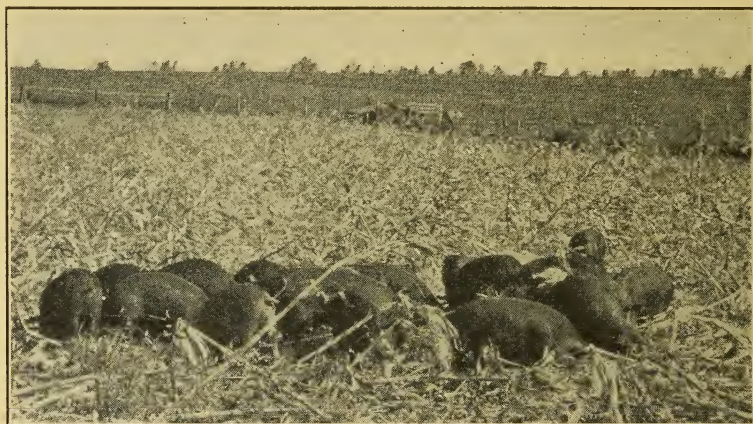


FIG. 26. Hogs make better gains in the field than where fed in a dry lot. They can husk more cheaply than it can be done by man. The labor saved can profitably be used in other enterprises.

enables the farmer to limit his production to those products or crops that do pay a profit. The cost of production studies are valuable to the man who is operating a farm because they enable him to make comparisons of the profitableness of the different enterprises and combinations of enterprises that make up his scheme of farming. A careful study also enables him to reduce the costs or possibly to increase the profits by finding new ways of marketing his goods. These studies also give a knowledge of the elements that make up a farm plan and of the relations one to another of these different farm activities. With a complete knowledge of the cost of production data are at hand for analyzing the farm business and for determining just what enterprises should be included in a scheme of farming that should prove profitable.

Many people seem to hold to the opinion that a knowledge of the cost of production is fundamental in determining the prices that should be paid for commodities. This is not sound reasoning nor is it the basis on which prices are fixed or on which they should be fixed. Cost data should be used rather to determine how much of a commodity should be produced and when it would be profitable to produce it. The prices that should be fixed for an article will depend almost entirely on how many people want it and how badly they want it. That is the basis of price fixing on the commercial commodities and it would seem reasonable to suppose that prices for farm products should be dealt with in the same way.

CONTROLLING FACTORS OF COST IN CROP PRODUCTION.

The factors of cost that enter into the production of field crops are man labor, horse labor, seed, twine, threshing, values consumed in machinery, land rent and general expense. Table I from Bulletin No. 157 of the Minnesota Experiment Station, shows the number of hours of horse and man labor required per acre in raising the more common crops of that state. Under ordinary conditions all labor, including that of both man and horse, constitutes approximately two-fifths of the cost of producing the small grains; one-half the cost of producing corn, and two-fifths to one-half the cost of producing hay

TABLE I.—Average Annual Hours of Labor per Acre Required in Producing Field Crops in Minnesota, 1902-1912.

CROP.	Northfield, Rice county.		Marshall, Lyon county.		Halstad, Norman county.		Glyndon, Clay county.		Average, all farms.	
	Hours per acre.		Hours per acre.		Hours per acre.		Hours per acre.		Hours per acre.	
	Man.	Horse.	Man.	Horse.	Man.	Horse.	Man.	Horse.	Man.	Horse.
Wheat, shock threshed.....	14.5	28.0	12.2	29.4	10.8	28.2	.....	.....	12.3	29.9
Oats, shock threshed.....	14.7	28.2	12.2	30.0	11.7	29.6	.....	.....	13.5	28.9
Barley, shock threshed.....	14.8	27.9	13.3	31.4	11.9	29.5	.....	.....	12.8	29.9
Fall rye, shock threshed.....	.....	.....	10.2	27.0	10.4	27.5	.....	.....	10.3	27.2
Flax, stack threshed.....	15.0	31.0	15.6	40.2	12.9	32.6	.....	.....	13.7	33.8
Corn, husked.....	30.1	53.6	22.6	51.6	30.9	57.6	.....	.....	26.2	54.2
Fodder corn, cut, shocked and stacked,	33.7	54.1	25.0	51.0	33.1	52.8	.....	.....	30.4	52.6
Ensilage.....	33.7	56.0	.....	.....	31.5	63.5	.....	.....	32.6	59.8
Potatoes, machine production.....	.....	.....	.....	.....	.....	.....	44.4	75.0	44.4	75.0
Mangels*.....	.....	.....	.....	.....	.....	.....	180.7	99.3	180.7	99.3
Hay, timothy and clover, first crop.....	12.7	11.8	11.0	13.4	12.6	13.8	.....	.....	12.3	13.0
Hay, timothy and clover, two cuttings,	21.3	20.3	15.6	23.0	.....	.....	.....	.....	20.7	21.5
Hay, wild.....	9.1	10.0	11.2	13.5	13.5	20.7	.....	.....	12.2	16.9
Timothy, cut for seed.....	.....	.....	6.0	8.5	4.4	6.1	.....	.....	5.1	7.1
Clover, cut for seed.....	10.1	11.3	8.1	13.6	.....	.....	.....	.....	9.2	12.3
Hay, millet.....	18.5	36.3	16.9	39.1	17.3	39.5	.....	.....	17.3	39.1
Hemp.....	14.3	27.4	.....	.....	.....	.....	.....	.....	14.3	27.4

* Grown at Minnesota Experiment Station.

when two crops are cut. It will be seen, therefore, that the cost of labor is one of the large factors in determining the total cost of production of crops. While 12.3 hours of man labor and 29.9 hours of horse labor are required in the main to produce an acre of wheat, it will be noted that at Halstad, where farms are large and where large machinery is used, the hours of man labor were reduced to 10.8 hours and horse labor was reduced to 28.2 hours. It is quite probable that on many farms in the Halstad district wheat was produced at as low an expenditure as 8.0 hours per acre of man labor and 25.0 hours of horse labor. A man who could reduce labor on his crops to this extent without impairing his yields and tillage would be producing wheat at a considerably less cost than one who uses the average or more than the average amount of labor. This, in fact, is about the only place that a farmer can reduce materially the cost of production because the other factors of cost are more or less inflexible. That is to say, a stated amount of seed must be used and the seed must be of good quality. To reduce it or to use poor seed would be to jeopardize the crop. Twine and threshing costs cannot be influenced greatly and are a small factor in any event.

The use of the land is the factor involving the next highest cost. It will run from 25 to 30 percent of the total cost of producing crops. While the farmer himself usually ignores this as a cost of production, an understanding of the business of farming is not complete unless it is figured in. The use of the land is a proper charge against the crop whether it is actually paid in cash or not. In estimating costs of production, charges are usually made for the use of the land, that are based on interest at the going rate in the community on the value of the land. In any case where a cash rent is paid for the land, that, of course, becomes the charge for the use of the land. As before stated, however, whether the land is owned and an interest rate charged or whether it is rented, the average cost of the land will be about 25 to 30 percent of the total cost of the product. Obviously the man who can obtain the use of cheap land which is at the same time productive will profit materially in the production of grains. That is why grain raising is commonly adopted in the prairie regions where land is cheap. But, because of low production which is caused in part by poor tillage, profits from grain raising are seldom continuous or very large.

The cost of producing corn husked from standing stalks, corn silage and wheat in Minnesota for the years 1912-1917, are indicated in Tables II, III and IV. These are taken from bulletin No. 179 of the Minnesota Experiment Station. It will be noted that at Cokato the cost of producing an acre of corn is \$20.74. With corn selling at \$1 a bushel, therefore, a yield of 21 bushels per acre is necessary to cover the bare cost of production. One dollar a bushel is, of course, higher than the average price for the corn crop in Minnesota. Were it to sell

TABLE II.—*Cost of Producing Corn—Ear Husked from Standing Stalks.*

ITEM.	Halstad.				Cokato.			
	Total acreage 5 years.	Man hours per acre.	Horse hours per acre.	Cost per acre.	Total acreage 5 years.	Man hours per acre.	Horse hours per acre.	Cost per acre.
Seed.....	829.76	.....	.....	\$0.46	1,129.15	.....	.....	\$0.47
Shelling seed.....	361.19	0.24	.....	0.04	293.05	0.50	.....	0.07
Testing seed.....	197.49	0.52	.....	0.08	187.49	0.56	.....	0.07
Grading seed.....	89.56	0.16	.....	0.02	66.89	0.08	.....	0.01
Manuring.....	604.89	2.25	5.22	0.98	1,002.81	2.75	4.32	0.93
Plowing.....	823.74	2.64	12.39	1.91	646.28	4.21	10.63	1.92
Disking.....	671.94	1.20	4.85	0.72	940.58	1.63	5.87	0.92
Harrowing.....	817.80	1.02	3.63	0.59	1,167.96	1.51	4.00	0.70
Planting.....	834.02	0.88	1.78	0.34	1,064.83	1.04	1.90	0.38
Cultivating.....	805.73	4.94	11.35	2.08	1,154.84	7.56	14.39	2.91
Husking.....	61.79	12.31	16.15	3.57	258.50	13.60	10.72	3.67
Machinery cost.....	.....	.....	.....	1.53	.....	.....	.....	2.20
Land rental.....	.....	.....	.....	4.20	.....	.....	.....	5.00
General expense.....	908.62	.....	.....	0.91	1,140.71	.....	.....	1.49
Totals.....	.....	26.16	55.42	\$17.43	.....	33.44	51.83	\$20.74
Marketing.....	.....	.....	.....	.....	72.24	5.39	10.13	\$2.07

TABLE III.—*Cost of Producing Corn Silage.*

ITEM.	Halstad.				Cokato.			
	Total acreage 5 years.	Man hours per acre.	Horse hours per acre.	Cost per acre.	Total acreage 5 years.	Man hours per acre.	Horse hours per acre.	Cost per acre.
Seed.....	227.21	.....	.....	\$0.89	82.67	.....	.....	\$0.82
Shelling seed.....	3.16	0.32	.....	0.04	2.39	0.42	.....	0.06
Manuring.....	604.89	2.25	5.22	0.98	1,002.81	2.75	4.32	0.93
Plowing.....	823.74	2.64	12.39	1.91	646.28	4.21	10.63	1.92
Disking*.....	184.69	1.39	5.57	0.95	16.18	1.42	4.27	0.70
Harrowing.....	182.50	1.01	3.34	0.64	67.11	1.21	3.49	0.58
Planting.....	228.51	0.89	2.00	0.40	60.66	0.79	1.58	0.30
Cultivating.....	208.23	3.63	8.03	1.64	61.13	5.59	10.67	2.15
Cutting.....	222.70	1.87	5.31	1.02	34.92	1.80	5.41	0.90
Twine.....	173.02	.....	.....	0.48	76.74	.....	.....	0.38
Filling silo.....	64.81	8.29	10.92	4.09	100.17	12.52	14.92	4.19
Coal.....	.....	.....	.....	.....	33.62	.....	.....	0.98
Rental, power machinery.....	.....	.....	.....	.....	47.08	.....	.....	1.16
General expense.....	64.81	.....	.....	0.74	88.25	.....	.....	1.50
Farm machinery and ensilage cutter.....	.....	.....	.....	2.71	.....	.....	.....	3.80
Land rent.....	.....	.....	.....	4.20	.....	.....	.....	5.00
Totals.....	.....	22.29	52.78	\$20.69	.....	30.71	55.29	\$25.37

* The seedbed was disked twice, harrowed 3.2 times, and cultivated 3 times at Halstad; and disked 1.5 times, harrowed 2.7 times, and cultivated 4.4 times at Cokato.

TABLE IV.—*Cost of Producing Wheat—Fall Plowed.*

ITEM.	Halstad.				Cokato.			
	Total acreage 5 years.	Man hours per acre.	Horse hours per acre.	Cost per acre.	Total acreage 5 years.	Man hours per acre.	Horse hours per acre.	Cost per acre.
Seed.....	2,869.27			\$1.80	1,729.32			\$1.99
Cleaning seed.....	2,015.66	0.37	0.01	0.06	1,218.84	0.46		0.06
Hauling seed.....	131.13	0.06	0.11	0.02				
Treating seed.....	1,055.09	0.14		0.02				
Manuring.....	604.89	2.25	5.22	0.98	1,002.81	2.75	4.32	0.93
Disking*.....	626.43	0.87	3.49	0.53	391.52	1.00	3.60	0.55
Plowing.....	4,847.14	2.84	14.04	2.00	3,048.03	4.11	12.00	2.07
Harrowing.....	2,845.13	0.74	2.85	0.44	1,691.74	0.85	2.39	0.40
Seeding.....	2,869.27	0.63	2.40	0.37	1,744.11	0.83	2.56	0.41
Cutting.....	2,732.14	0.82	3.01	0.47	1,765.84	1.01	3.41	0.56
Twine.....	2,732.14			0.23	1,765.84			0.24
Shocking.....	2,732.14	1.13		0.25	1,765.84	1.55		0.26
Stacking.....	707.05	2.83	3.00	0.89	1,178.22	3.71	3.88	1.08
Stack thresh labor.....	690.82	1.57	0.96	0.50	1,178.22	0.96	0.90	0.28
Marketing.....	880.55	0.72	1.38	0.28	584.76	1.74	3.15	0.64
Threshing, cash cost.....	690.82		0.69	0.69	1,178.22			0.95
Machinery cost.....				1.09				1.57
Land rental.....				4.20				5.00
General expense.....	2,726.30			0.59	1,751.96			0.86
Totals.....		13.97	36.47	\$15.41		18.97	36.21	\$17.85
Shock thresh labor.....	1,750.61	2.44	3.90	0.91	587.62	2.22	3.88	0.81

* The seed bed at Halstad was harrowed 2.3 times and disked 1.8 times, and at Cokato it was harrowed twice and disked 1.4 times.

at 75 cents per bushel a production of 32 bushels per acre would be necessary to cover the cost of production and that is approximately the state yield. Seventy-five cents per bushel is higher than the average price of corn for a ten-year period in Minnesota. If the price of corn should become so low as to



FIG. 27. Large yields of corn silage save land and supply desirable feed. The land so saved can be devoted to other crops, thus increasing the profits of the farm.

make it impossible to overcome the cost of production per acre by the value per acre, needless to say the production will be very quickly limited.

The cost per acre for growing wheat at Halstad during this same period was \$15.41. With an average state yield of 14 bushels per acre and an average state price of \$2 per bushel there is no question about the profitableness of growing wheat, but with wheat selling at an average price of 97 cents for the ten-year period preceding, there would obviously be a loss of almost \$2 per acre in the production of wheat. It is to bring out such facts as these that the cost of production studies are valuable to the producer of crops, and they may prove valuable also to the one interested in the production of livestock, because crops are a big factor in profitable livestock production.

Table V shows the hours required annually on Minnesota farms in the production of livestock and illustrates again the influence of labor in raising or lowering the cost of animal production.

TABLE V.—*Total Hours Required Annually per Head of Livestock.*

KIND OF STOCK.	Northfield.		Marshall.		Halstad.		1,920-acre farm.		Average all farms.	
	Man, hours.	Horse, hours.	Man, hours.	Horse, hours.	Man, hours.	Horse, hours.	Man, hours.	Horse, hours.	Man, hours.	Horse, hours.
Horses.....	78.8	3.6	72.2	9.9	97.4	11.8	91.5	13.7	83.7	9.6
Cows.....	143.6	39.6	128.0	27.7	158.2	22.4	228.7	25.8	148.0	31.8
Miscellaneous cattle.....	17.3	.....	7.0	.....	13.5	.....	12.8	.....	11.1	.....
Hogs.....	12.5	2.6	9.0	2.4	27.6	4.1	24.8	1.3	12.1	2.6
Sheep.....	3.3	0.4	2.3	0.6	5.0	0.7	.....	.....	2.9	0.6
Fowls (100).....	124.0	5.5	145.0	16.0	141.0	8.6	265.0	.....	141.2	9.6

This item and the cost of feed are the large factors in economic livestock production. A stock raiser who can care for the most cattle or hogs with a given amount of labor has an advantage in lowering production. If, combined with low cost for labor, he feeds judiciously and saves expense by growing most of the feeds used, another advantage is gained. It is in such ways as this that a knowledge of the cost of production will prove beneficial in increasing the profits from farming. The farmer who through good farm methods obtains large yields at a low cost of production and who sells to the best advantage and without undue expense, can materially increase the profits from his farm.

THE MIDDLEMAN A NECESSITY.

By L. D. H. WELD, formerly professor of business administration, Yale University.

WHY is the "middleman" always the "goat"? Four years ago the "middleman" in the food industry held the center of the stage and has continued to hold it ever since, sharing the limelight with the high cost of living. This is probably natural and to be expected, because food plays so large a part in the budget of the average family. For example, the National Industrial Conference Board has estimated that 43.13 percent of the expenditures of the average family goes for food. Then, too, the food problem is forced upon our attention daily, in fact, three times a day. We purchase a suit of clothes once or twice a year, and complain about the increase in price, but soon forget about it. But food prices are always before us. With the increase of food prices, attention is drawn to the problems of food distribution.

From time immemorial consumers and producers have been unable to understand each other.

The average wage earner sees food prices mounting higher and higher and he is sure that with eggs selling at 70 cents per dozen there must be mighty good money in it for the producer, and if he has any yearnings for country life he immediately begins to figure over again how profitable poultry raising must be. The producer, on the other hand, faced by ever rising costs of feeds and labor, and noticing the high prices paid by consumers in the city, is convinced that the so-called middlemen must be exacting an unreasonable toll for their services. At any rate, the distributor comes in contact with both producer and consumer and forms a convenient target for their wrath. When we can find no remedy for high prices, we can at least express our opinion of the "profiteers."

When the agitation against the middleman had reached its height about four years ago, investigations had been, or were being, made by municipal, state, and federal authorities, by colleges, economists, newspapers, and general conferences. Marketing committees were appointed by various organizations. Many of the states and municipalities appointed marketing directors and a Bureau of Markets was organized to carry on investigations for the federal government under the auspices of the United States Department of Agriculture.

The recommendations of these investigators ranged from practical suggestions to visionary dreams. The "Lubin Plan" provided for the government taking over the entire distribution of foodstuffs. With marketing agencies located in every county as well as in every state, all producers in the county would notify the county director of their total available surplus and the latter, in touch also with the demands for produce within the county, would bring seller and buyer in touch with each other. After disposing of as much as possible of the county's production within the county itself, the surplus would be determined and the state director notified. Then the same

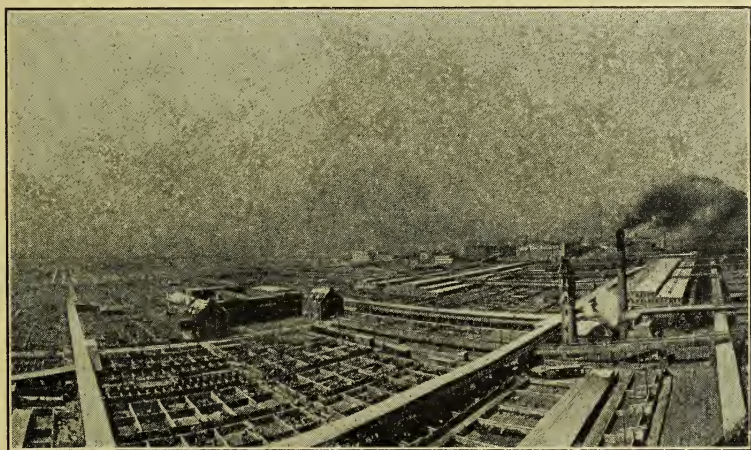


FIG. 28. Bird's-eye view of the Union stock yards, Chicago.

process would be repeated. The state director, in turn, would dispose of as much of the produce as possible between various counties within the state and notify the national or regional buyer of the state's surplus. This was perhaps the most elaborate plan which was really pushed to any extent, but naturally it was never adopted, for the originators overlooked the fundamental fact that America was not ready at the time to adopt any such radical socialistic plan.

During those days we heard much of the parcel post, and the "direct to consumer" plan. While it is possible to market certain products on a small scale without the intervention of distributors, it would be absolutely impossible to handle the great bulk of the nation's food from producer direct to consumer.

And now, four years later, practically the same system is in operation without any essential changes and the high cost of living is still before us, increased materially by the war. And to those who have made a study of conditions, this is not at all surprising. The methods of food distribution have grown up gradually to meet changing conditions and demands, and no new radical plan could replace present marketing machinery and materially reduce the cost of living. This does not mean that no improvements can be made in the present system, but it does mean that fundamentally present marketing machinery is based on correct principles and is performing the tremendous tasks imposed upon it with marked efficiency.

There are two main causes for the development of "middlemen." The first cause is found in the transition of this country from an agricultural nation where practically every community was self supporting, to an essentially urban status where the majority of the population resides in congested cities. In the early days each family or community produced practically all of its requirements, and no elaborate distributing machinery was necessary. Then farms were pushed farther and farther from the cities, the rich western lands were developed, refrigerator cars were built, and transportation facilities expanded, making possible specialized agriculture as we know it to-day—the oranges of California, apples of the Northwest, dairies of Wisconsin, and so on.

At present foodstuffs are produced, in many cases, thousands of miles from where they will be consumed. Famine conditions would prevail in any of our large cities if the present marketing machinery should cease to function.

The second cause for the development of middlemen is found in the increased demands for service by consumers. They have developed a taste for fruits and vegetables out of season, delicacies from foreign lands, and demand credit and hourly deliveries, and other costly services. These can only be performed by elaborate marketing machinery such as has been developed in this country.

The popular conception of the middleman is a greedy individual sitting back in indolent ease and exacting a toll from the various foodstuffs as they go from producer to consumer. As a matter of fact, distributing agencies perform important and essential services in bridging the gap between producers and

consumers. Middlemen search out producers of quality products, bringing to them a ready year-around market at their very doors. They even develop and finance new producing areas. It is the middleman who takes the risk of safely getting food from the producer to the consumer, which is an important item in the transportation and handling of perishable food-stuffs.

The middleman performs an indispensable and valuable service in storing surplus production so as to spread distribu-



FIG. 29. Dressing beef.

tion evenly throughout the year. If it were not for these distributors who risk their money in such enterprises, eggs, for example, could be bought for practically nothing during the heavy producing season and could not be obtained for any price during the winter months. It is the business of these distributors to study market demands and to prepare produce in the form and packages demanded by the trade.

The average consumer has no conception of the problem that this presents. The trade in one city wants nothing but brown eggs, while in an adjoining city consumers demand white eggs. American consumers prefer bright, red apples, while the yellow varieties of the northwest command a premium in Great Britain. Many other examples of these market preferences

could be given, and they must be analyzed and studied by distributors. Producers often pack foodstuffs in containers absolutely unsuited to the trade for which they are intended, and the produce must be repacked by the distributors. Many additional examples of the services performed by food distributors could be cited, but these are perhaps sufficient to show the valuable functions performed by them.

If we were willing to live as did our grandfathers and grandmothers, this marketing machinery would not be necessary. Our grandparents did not eat lettuce during the winter months, or enjoy grapefruit from Florida, cantaloupes from California, eggs in December, or a great variety of fresh meats during every day of the year. These luxuries, nowadays considered as necessities, are made possible by the condemned middlemen.

If one is willing to pay cash and dispense with the elaborate delivery services which are maintained by the average grocery store, considerable savings can be effected. Yet there is a large percentage of the public who would rather pay more for food and have the advantage of these additional services and conveniences.

The average layman is inclined to picture marketing methods as being more or less standardized and definite. As a matter of fact the methods in one portion of the food industry may differ widely from those in another.

For example, in the fruit and vegetable industry, with the exception of a few large coöperative associations and marketing agencies, the business as a whole is rather loosely organized, in that there are thousands of small individual shippers, distributors, receivers and handlers, and the products may take any one of several routes in the trip from producer to consumer. There are, however, two usual courses. Ordinarily the fruit grower either sells direct to the country or traveling buyer, or else ships to a commission merchant located at the market. The country buyer in turn may ship to a commission merchant, or he may be buying for some wholesale house. The wholesale car lot receiver in the market will probably split up the shipment between jobbers, who supply the retailers. Thus the goods finally reach the consumer.

In addition, we may find that a coöperative shipping association or the auction may be used at times. It is thus ap-

parent that fruit or vegetables may pass through a number of hands before reaching the consumer.

In the grain trade we find that there is a more definite organization or system. The farmer usually disposes of his grain to the local elevator, located at a central shipping point. The grain then goes to either a commission man or dealer in the market, who sells it to the miller, terminal elevator company, shipper or exporter, using the local grain exchange as the medium for the transaction. These exchanges have

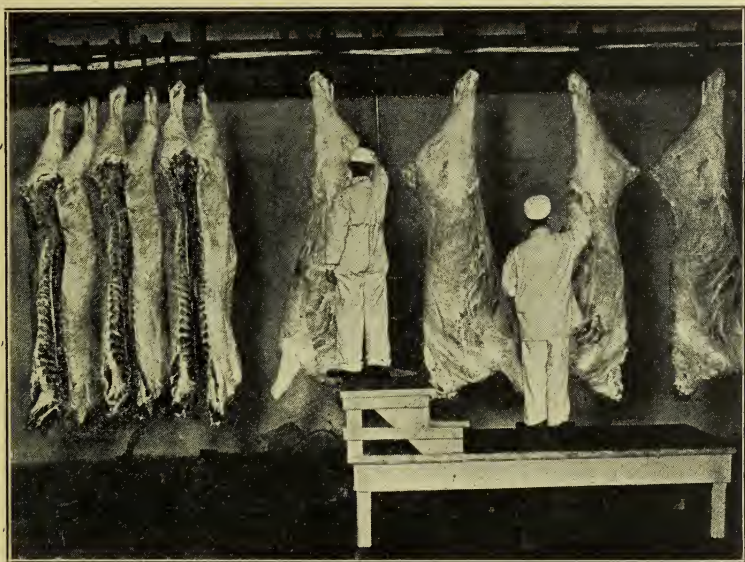


FIG. 30. Washing beef and final government inspection.

developed a greater standardization in grades and selling method than is found in the fruit or vegetable industry.

In the livestock industry, however, we find the most developed marketing system, operated with modern business efficiency. The raw material must go through a complicated manufacturing or finishing process, and extensive machinery is required. If the farmer is operating on a large scale, he can ship full carloads of cattle direct to one of the principal primary livestock markets, located at Chicago, Sioux City, South Omaha, National Stock Yards (East St. Louis), South St. Paul, Kansas City, Fort Worth, South St. Joseph, Denver, etc. If he has not enough stock to fill a car, he can sell to a local buyer, who will assemble enough purchases to make up a full

car. In either case the car is usually consigned to a commission merchant who sells the cattle to the packers at the stock yards.

The remarkable organizations built up by the packers are now able to perform all functions of slaughtering, dressing, distributing, and selling to the retailer, as well as of manufacturing numerous by-products from materials which were formerly thrown away. Thus the packers perform five distinct functions, namely, slaughtering, manufacturing, storing, distributing and jobbing. There is perhaps no other industry where so many steps in the trip from producer to consumer have been eliminated as in the packing business.

It is a common belief that the cost of marketing any article is in direct proportion to the number of hands through which it passes. However, this is not always true for many other factors influence the cost, such as perishability, bulk and relation to value, difficulty in handling, and seasonal production.

Superior efficiency in the packing industry is demonstrated by the fact that the farmer receives approximately two-thirds of the retail selling price of meat¹ as compared with 35 percent of the retail price of fruits and vegetables, according to averages which have been worked out from many sources. In fact, in a study conducted by the California Fruit Grower's Exchange, the famous coöperative association of California orange growers, it was found that despite their very efficient machinery and their coöperative pooling of profits and expenses, the grower received on the average only 29 cents out of the consumer's dollar.

Expressing the packers' efficiency in another way it has been estimated that in 1918, out of the average dollar received by Swift & Company from retail and wholesale dealers from sales of beef, pork, mutton and their by-products, the producer received 85 percent, and that out of the remaining 15 percent, only 2.04 percent remained as profits to the company after deducting the expenses of labor, freight, etc.

Returning such a large percentage to the producer is only possible in an organization which handles business on a tremendous scale such as exists in the packing industry. It is common knowledge that the total dressed meat obtainable from an animal sells for less than the original price of the live steer.

¹ See Report 113, Office of the Secretary, U. S. Dept. Agriculture, 1916, "Meat Situation in the United States," page 6.

This seeming paradox is explained by the scientific utilization of by-products, made possible through large-scale operations, and which formerly either were wasted or crudely handled.

This large scale business has resulted in other benefits to consumers and to the industry as a whole. In the early days railroads were unwilling to supply refrigerator cars for transportation of perishable meats and the packers were forced to build their own cars. Branch houses have been established in all sections of the country to distribute the finished product. These houses must be equipped with refrigeration facilities, which, of course, entails considerable investment.

With this tremendous equipment and organization the packers have been able to offer to producers the same ready market for their dairy products and poultry that they already enjoyed for their livestock. The packers have been able to effect economies and to render services which could not be approached by any other organization, with resulting benefits to producers and consumers. The packers' influence in extending and broadening markets for farm products is difficult to estimate, but it must be acknowledged that they have been one of the determining factors in the expansion of American agriculture.

Middlemen have been accused of practically every commercial sin. As a matter of fact the industry as a whole is suffering for the malpractices of a few. There are unscrupulous distributors just as there are unscrupulous firms in any industry. But this does not mean that the trade as a whole should be branded as dishonest. In this industry as in others there has been a marked development of business ethics. Practices which were applauded as shrewd business a few years ago are now frowned upon by the trade as a whole, and, as might be expected these malpractices of the past are always advertised and emphasized by investigators of the food problem.

Many of these accusations against the trade are found to be absolutely groundless when the real facts are ascertained. For example, we have read story after story of perishable goods having been dumped by unscrupulous dealers in an effort to keep up prices. The United States Bureau of Markets has investigated as far as possible every one of these claims which has been brought to its attention, and since the organization of the bureau five years ago not one of these accusations has ever been substantiated. In the majority of cases the consumer had

seen some perishable goods, which perhaps had been condemned by federal investigators and ordered thrown out as a menace to public health. The consumer immediately jumped at the conclusion that there was a case of willful dumping, and immediately started a story which soon developed into a sensational article.

The part played by middlemen in the war perhaps will never be fully told or appreciated. A distinctive example of real service is that performed by the big packers in furnishing meat



FIG. 31. Avenues of beef hanging in the cooler.

to the forces in France. It is a serious question whether any other system of marketing would have met the enormous demands placed upon this industry. It is also interesting to know that the packers were the one big industry which filled all of its government orders and contracts with practically 100 percent efficiency.

The coöperation between business and the government has been unusually close in the food industry. Many of the largest food handlers in the country have given their entire time during the war to the Food Administration, and Mr. Hoover has made it a policy to confer with and secure the advice of representative members of the trade before deciding on or issuing important regulations. The food industry realized the un-

usual problems developed by the war, and supported sane and constructive leadership with whole-hearted coöperation.

Undoubtedly many minor improvements and changes can be made in the present marketing machinery. Some changes will be necessitated by the economic development of the country and future changes in our mode of living, but fundamentally the system is right. It has stood the test of competition and has been developed step by step in the hard school of experience.

The question of lower food prices lies with producers, consumers and middlemen. Education of, and coöperation between, all three classes are more essential, and will be more effective, than legislation.

The chief of the Bureau of Markets was once asked just what work the bureau was doing. He replied that the object of the bureau was really very simple. It was to raise the price received by the producer, lower the price paid by the consumer and not destroy efficient marketing machinery in the process. It is seemingly impossible to cut down this margin without interfering with legitimate trade; and yet it can be done. The method is to eliminate waste on the part of producer, consumer and distributor. If this were done, and done thoroughly, producers would have more to show for their labor, as great a percentage of the consumer's salary would not have to go for food, and there would be enough left to pay legitimate distributors a fair return for their services.

Knowledge is what is needed; publicity regarding the services performed by distributors; education regarding wasteful practices; and last, but not least, coöperation between all three classes.

RELATION OF BANKING TO THE CATTLE INDUSTRY.

By M. L. McCLURE, Federal Reserve Bank, Kansas City, Mo.

THE governor of the Federal Reserve Bank at Kansas City, in his annual report of January 1, 1919, states that that bank during 1918 discounted for its member banks over ninety-eight million dollars of loans secured by livestock. This sets us to wondering how much cattle paper is handled annually by all the banks and cattle loan agencies in this Federal Reserve



FIG. 32. The production of meat is a matter of first importance, and it falls on the middle west to produce a very large proportion of what is needed to feed the world.

district. We are led to believe the amount is very large, and from the best information at hand it is estimated at three hundred million dollars outstanding all the time. The loaning of this vast sum of money to cattlemen is sufficient to establish the relation of the banks to the cattle industry, but all is not nearly covered by a statement of this kind. There is much more to be considered. The relations are not altogether one of lender and borrower. The borrowers engaged in the cattle industry are also depositors in the banks. What the deposits in banks from the cattle industry amount to in this Federal Reserve district is not known, but it must be very large, as cattlemen are not all borrowers, and those who do borrow do not all

borrow at one and the same time, and all keep checking accounts with their banks.

The cattle business is a very large part of the whole business done by the banks west of Kansas City, and is of great importance. That class of business is sought after by all banks and is considered very desirable. If there ever was any question as to their mutual interests this makes it clear that the prosperity of the banking business depends on the prosperity and success of the cattle industry. To make loans safe and increase deposits in the banks the cattlemen must be prosperous.

The cattle and other livestock interests in Kansas are large, as everyone knows. A large percent of the livestock marketed at Kansas City during 1918, with an estimated value of four hundred million dollars, was shipped to that market off the farms and ranches in Kansas, and this meant deposits in banks and notes paid.

I believe that it is admitted that the cattle industry is financed by borrowed capital to a greater extent than any other agricultural enterprise, or more than all others put together. I think the reason of this comes from the fact that the farmer uses his own capital to buy land on which to conduct his business, and as his capital increases he increases his land holdings and borrows the liquid money to carry his cattle business, often using the borrowed money only part of each year. This is reasonable and as it should be, especially in this western country which has not as yet accumulated sufficient capital to carry such business without outside help.

The production of meat is one of first importance, and it falls on the Middle West to produce a very large proportion of what is needed to feed the world. Other conditions being equal, it can easily be seen how the money situation, whether easy or close, can affect the production of this valuable food product. If the industry can be plentifully supplied with money at a reasonable rate of interest production can be increased, and the farmer will be induced to raise the necessary feed provided the bankers stand ready to make the loans to carry the livestock to consume it. Without a liberal financial policy on the part of the banks production will be reduced, not only of meats, but the land will not be used for raising feed, and farming conditions will be greatly disturbed, labor curtailed, and general depression prevail in the agricultural districts. The curtailing of the

feeding of stock is also detrimental to the value of the land, as feeding is necessary to maintain its fertility.

The policy of the Federal Reserve Bank, in its activities, has been very favorable to the livestock interests, making an exception in the length of the time such paper can be made, allowing six months maturity on it. No paper but that based on livestock and agriculture can be accepted by that bank for a longer period than ninety days, and so far no discrimination has been made in taking renewals for six months longer, after the original paper matures. Furthermore, there is no discrimination made in the offerings of a member bank between steer- and cow-secured loans.

During the summer of 1918 there appeared to be a movement among banks and cattle loan companies to ask borrowers to liquidate loans secured by breeding stock. This was brought about by war conditions and the heavy demand on banks, who, after all, carry the loans. They patriotically bought government security and exhausted their resources, and to take care of their customers borrowed freely from the Federal Reserve Bank and elsewhere. To one who knew the situation during 1918 it is very apparent that the banks stood the acid test and did their part to aid and protect the cattle industry. But many western banks and loan companies who sold this class of paper in the eastern markets found that avenue for discounting this kind of secured paper closed. To relieve this situation the matter was brought to the attention of the Federal Reserve Bank at Washington, and through that organization the War Finance Corporation was induced to establish agencies to make loans on stock cattle.

As this corporation, through act of Congress, was capitalized out of the Treasury of the United States, this virtually meant that the United States government, realizing the emergency, and in the interests of increased production necessary to carry on the war, took this method to aid the situation, and agreed to loan the cattle industry money out of the United States Treasury. An agency was established at Kansas City, and about two and one half million dollars was loaned from that agency. The signing of the armistice, November 11, after the agency had been in operation for not much over a month, necessarily curtailed the activities of the War Finance Corporation, it only having been organized for the war period, and being limited to do business only during that period. The agency

closed December 1st. An agency was also established at Dallas, Texas, where around five million dollars was loaned in that Federal Reserve district. This effort was of some benefit, but was not in operation long enough to overcome the burdensome technicalities and inelastic methods which always obtain in governmental activities. All such loans first had to be approved at Washington, which, owing to distance from loaning point, was necessarily very technical. Had the agency been continued longer it might possibly have overcome these difficulties.

There has always been more or less discrimination against loans secured by breeding herds of cattle. This is brought about by the fact that a loan secured by that class of property is not as liquid as steer paper. By its very nature, steer paper is bound to liquidate itself, as steers to be profitable usually must be marketed before or by the time they become four years old. Banks cannot be expected to loan a very large percentage of their liquid deposits on security which, if they are compelled to call at maturity, will work a hardship on the borrower. Such a call might possibly be at an inconvenient time for the marketing of that class of security. It is possible in such a case that the value of the security could shrink fifty percent. This unpopularity of breeding loans is not caused by any doubt of the security but on account of the time demanded by the borrower and necessary for his convenience. However, banks can and do invest a percent of their available money in such loans, realizing it is necessary to maintain breeding herds.

In some way a plan should be devised to better finance the breeders of beef cattle so as to give sufficient time for the borrower to pay his loan out of his increase, and not be compelled to pay it out of the capital herd. Three- to five-year loans would give sufficient time. It is to be hoped that a corporation will some time be formed by those interested, strong enough, which can make these stock cattle loans, giving the borrower sufficient time, not by a promise to renew, but making the paper for the full time agreed upon. In this way the borrower and lender can be sure, if conditions are favorable, that the loans will be liquidated at maturity out of the increase. With proper connections to handle debentures, this, I believe, can be done, and would prove profitable to the lender and work a great benefit to the cattle industry by increasing production.

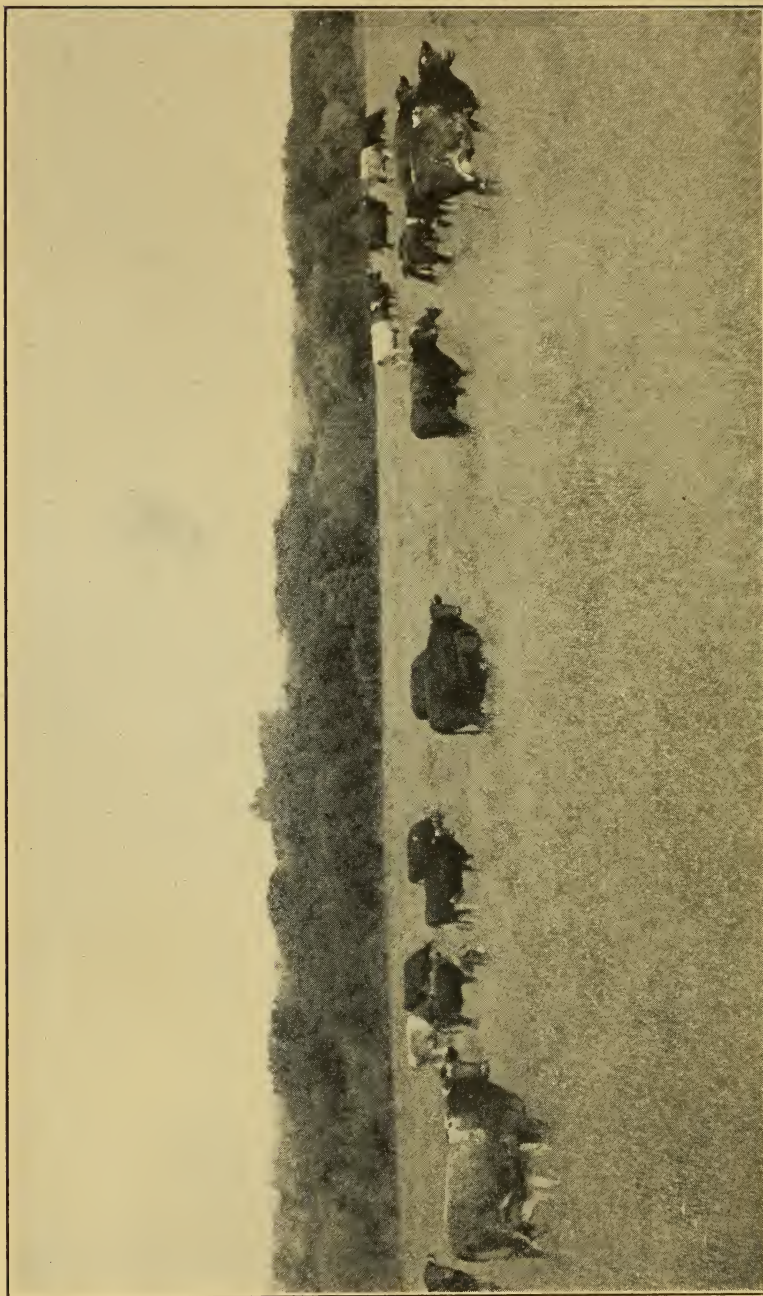


FIG. 33. The cattleman must always maintain a reserve in pasturage to cover unexpected drouths, and a good reserve of feed should always be on hand as insurance against loss by bad winter storms.

I do not advocate the government going into the financing of the cattle business. In principle it is wrong, and it was not found very satisfactory in the effort made by the War Finance Corporation. Keen discrimination must be used to safely make these loans. If a policy is ever announced that the government will make loans on cattle, every Tom, Dick and Harry, the inexperienced, the impractical, the no-account, the dishonest, and those unworthy of credit will apply by the thousands, expecting to get something for nothing, claiming their rights to raid the United States treasury as American citizens, through political influence.

On the whole, during the past ten years the situation in regard to obtaining loans on stock cattle has improved. In well-settled farming districts there is no trouble now to obtain the small loans necessary, and not much, if any, discrimination is made between steer and cow loans. The larger stock cattle loans needed further west, to stock the pastures, are not so popular as two years ago, but the condition is much better than ten years ago. This unpopularity of loans on breeding herds may only be temporary and caused by war conditions, and later when these conditions change become as popular as they have ever been, with a steady gain for the better. And after all, too easy money may not always work for the benefit of those engaged in the breeding of livestock. Too much stimulation might induce a too rapid expansion and increase production to exceed the demand. However, at the present time I believe no one doubts but what it would be a universal benefit to increase the beef herds in the United States.

Of late years there have been many things to retard production, which has not nearly kept pace with the increase of population, and among them can be mentioned the drouth for over two years in Texas, and the consequent shortage of the calf crop; the financial situation causing the marketing of cows, heifers and calves in large numbers, and the prevailing high prices at the market, inducing many breeders to ship stock that ought to have been kept for breeding, and which was bought by the killers and put in cans for the army. The high prices of the past two years have induced the marketing of steers at a younger age than usual and there is now an acknowledged shortage of three- and four-year-old steers. The herds of livestock in Europe are depleted and we must do our part well or the world will go hungry for meats. It is the duty

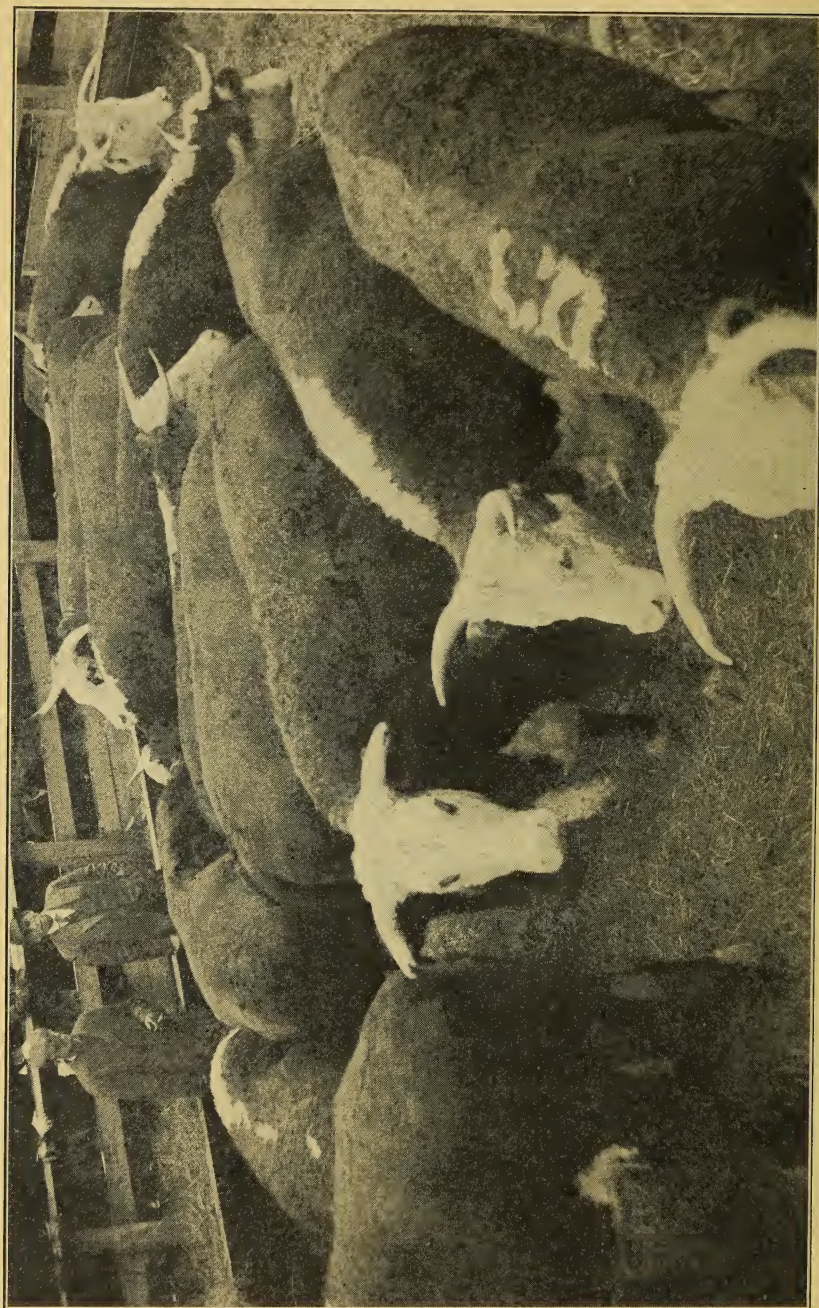


FIG. 34. A carload of Kansas deposit increasers and loan payers that netted \$397.32 each.

of the banks to take up this burden and finance this great industry. It is also the duty of all governmental agencies to encourage the extending of this credit, with the assurance as far as possible that it will be supported by all lawful means.

The governmental price extended to wheat growers has stimulated the production of wheat, and now that peace is in sight, it is predicted that quick production of grain will result in Europe. Hence, with a stimulated over-supply, prices on grain will quickly be lowered. But it will take some years to increase production of livestock to normal conditions before the war. Therefore it is predicted we will have good livestock prices for some time yet, not so high perhaps as in the past two years, yet profitable prices if handled carefully. With these prospects it will be but natural for the producer of grains to turn to livestock, and it is to be hoped he will be able to finance his deals in the interests of increased production and to maintain the fertility of his land.

There is a very cordial relation between the bankers and the cattlemen. Many bankers are also engaged in the cattle business, and many cattlemen are bank stockholders and directors. Loans secured by cattle are usually given preference throughout this western country. There is sometimes disappointment among cattlemen who are not able to borrow from the banks as much money as they think they need, but it must be remembered that this is also true of other businesses, and the bank must govern its advances and investments by the amount of funds it has to loan and by the amount the borrower is entitled to get from it, measured by his capacity and financial ability. It has been learned by banks, through experience, that cattlemen lose more money through over-stocking and over-expanding than in any other way. A reserve always must be maintained in pasturage to cover unexpected drouths, and a good reserve of feed should always be on hand as insurance against loss by bad winter storms.

The rate of interest charged by banks on cattle loans in Kansas is now from 7 to 10 percent, owing to locality and size of loans. In the eastern part of the state the rate is lower because the deposits in that part of the state are heavier, as it is from that source mostly the banks have funds to loan. Many cattlemen can remember thirty to forty years ago when they paid from 12 to 20 percent per annum. Now, in the same locality, the banks are loaning at from 7 to 8 percent, and are

making more money than they did when the rate was double, for the reason that their deposits are larger and they have more money to loan, and the security is safer. Yet in that early day banks served their communities the best they could, and were a real help to the cattle industry. I know some very rich cattlemen who paid those high rates of interest years ago when they made their start in the cattle business. This goes to prove that while interest is one of the main costs of handling cattle there are other things that enter into the cost which cut a figure in the profits even more than interest.

When peace is signed, and when government securities are absorbed, and the readjustment of financial affairs caused by the inflated war period are completed, we can look for some reduction in the rate of interest on cattle loans. However, it can be said that interest rates did not advance during the war in same proportion as food products and merchandise.

The prosperity of the western country depends to a very great extent on the prosperity and success of the cattle producer. Likewise the safety of the loans and the increase of deposits are also dependable on the same thing. Therefore banks should continue energetically to support the interests of the cattle producers in every manner possible. Where their interests are jeopardized for any reason it is important that the banks rally to the support of the cattle industry and when necessary assist in obtaining proper legislation to protect the producers. Bankers must not forget where their business comes from.

Having been in the cattle loaning business for over thirty-five years, I can speak of the good will and the cordial feeling that has always been maintained between these two interests. They are so closely allied in their prosperity and in their investments that it is almost impossible to imagine a situation whereby their interests could be divergent.

HOME ECONOMICS.

WOMAN ON THE FARM.

By MRS. W. R. MILLER, farmer's wife, Topeka.

WHEN we stand very close to that which we are examining, our conclusions are apt to be distorted, small things loom large, and those really greater but more remote do not assume proper proportions. If we desire to get a true perspective we must look at it from different angles, if possible; get away some distance and by comparison see more truly.

This lack of perspective is especially true of the country housewife, for she has such a multitude of ordinary routine things to do, every day or every week—things which may vary with the season perhaps, but which, like the seasons, are ever recurring.

It is the housewife's business everywhere to keep the home clean and in order, a task requiring never-relaxing vigilance. Under city conditions, with sprinkling carts, paved streets, and sidewalks, the army of dirt does not march quite so rapidly, nor is it given quite such entrance by members of the household, and when it does arrive it is not so hard to rout. Just send for the vacuum cleaner and in an hour or so all the rugs and furniture and hangings are free from dust, and as electricity is the power used, the rest of the cleaning is easy.

The laundry work, simplified even in the country over yesteryear's days by washing machines and wringers, and in many cases by the farmer's gasoline engine, yet takes time and energy. The oil stove lightens the burden of ironing day, but still does not lift it as does the electric iron, or so completely as does the laundry wagon which will call at the city home every week or in any emergency.

To the housewife falls the duty of feeding her family. Every day in the year menus must be planned and meals served. The farmer's wife cannot depend on the grocer and huckster, but must take a long look ahead, and in the winter preserve at least a portion of the summer's meat supply, and plan for the next year's garden. In the summer she must gather and use and store fruits and vegetables against the

winter's need. Some farmer men like to make garden and do not turn the vegetables over to Friend Wife until they are ready to enter the kitchen; but some others will plow and harrow the plot, and perhaps linger to scatter a few seeds, then he must go away to the field, and that particular corner sees him no more. Not that he does not appreciate crisp lettuce, early cucumbers, tomatoes, and the like, but there is too much else for him to do about the place, and his wife can do this work. It is good health-giving work for her, too, if it is not overdone—far better for her and her grandchildren than an accumulation of embroidered pillow cases or crocheted centerpieces. But the planting and cultivation and gathering of the garden crops, such part of it as comes to her to do, added to the cooking and canning and serving, do consume considerable time and effort.

When we think of the garden we also have in mind the strawberry patch, the raspberries, blackberries, cherries—all the fruits to be gathered by wife and children. Of course, few farms will have all the fruits home-grown, but it is worth the effort required to raise all the climate and soil conditions will permit of such things as the family relishes, for both fruits and vegetables lose much of their flavor and desirability when they are shipped.

And right along the same line comes the beautifying of the home grounds. What woman does not love flowers? And you will not find many homes where there is not at least some flowering shrub, some patch of annual flowers, or some blooming potted plants if there is not opportunity for anything more. Where the farmer as well as his wife has this love of beauty it is much easier.

Just when we are busiest about the garden it is time to start the incubator. We used to set the hen, but that is too slow; besides, Biddy is somewhat notionate, and does not always appreciate our ambition to have fried chicken to go with the first peas and early potatoes. Yet we must not omit the chicken industry when looking at woman's work on the farm. Time was when the proceeds from the eggs added quite considerably to the farm income, but in these topsy-turvy days there is room for debate whether it would not be more profitable to sell the flock and the grain which they require. But what sort of a farm would it be without chicken for dinner occasionally, or what sort of a springtime without the brood of cunning, downy chicks?

These are some of the home labor items that fall to the lot of the farmer's wife. I will not speak of mending or sewing, milking and other dairy work, and the occasional bit she may do in the field to help in an emergency. According to her capacity will these consume her time and strength and interest. In common with womankind everywhere she has her social life, her intellectual life, her religious life, and I am not sure that these interests of hers are any different from those of the male members of her household.

Once I read of two women who were schoolmates, and who went away to college together. After graduation one of them took a business course and in a few years secured a responsible position with a firm doing a large business. The other, after a year or so, married a farmer. The business woman of course lived in a city, with all its opportunity for attending concerts, lectures, and so forth, and she availed herself of these privileges. She belonged to a large city church, which she attended regularly. The farmer's wife had her home duties, her growing family, and her part in the community and church work,



FIG. 35. The woman on the farm has the freedom of all outdoors.

entertaining, as did her neighbors, such strangers as came to the community. As her children became older and less dependent she took more part in church, Grange and other community activities. At fifty she had met and entertained in her home many eminent people of her state, and her influence extended far beyond the confines of her immediate neighborhood. Her girlhood friend had her business associates, but because of the environment in her life she had not been able to develop as had other women, for in rural communities there is so much more chance for individuality.

Life is not a simple matter anywhere. The world, because of such vast improvements in methods of communication and travel, is not nearly so large as it used to be. We can know what is happening on the other side of the globe in less time than it used to take for the news to travel across the state. The telephone links cities together, joins town and country, and hinges neighborliness to farm dwellers living miles apart. The daily delivery of mail with papers and magazines and friendly letters, puts us in touch with world affairs, and we learn of the events of the day almost as soon as the city people. The automobile, in ever-increasing numbers, coupled with good roads demanded by the autoist, but the benefit of which extends to everyone, is another great boon for farm folks.

The one great objection to the farm used to be its isolation, and now that has been removed to a very great degree. The other extreme is as objectionable. In the centers of population one is with people all the time. There is no escape except in the privacy of one's own room. Under such conditions it is difficult to keep one's poise and judgment, and not to be unduly influenced by public opinion. It becomes easier to go with the crowd, to dress and eat and play as the crowd does. Here in the country we now have the advantage. We come, or at least can come, in contact with people often enough and closely enough to get in sympathy with their viewpoint, but we are also alone enough about our own business to ponder and sift and form our own opinion. Emerson says, "It is easy in the world to live after the world's opinion, it is easy in solitude to live after our own, but the great man is he who in the midst of the crowd keeps with perfect sweetness the independence of solitude." Farm folks can have a nice balance between the crowd and solitude.

The mother in the country has a much better opportunity to

keep in touch with the lives of her children. How many a thoughtful mother envies you on the farms, because when school is out your children can be happily occupied at home. No need to wonder and worry about where and with what associates they are. There is no place in the world like a farm for growing children, especially boys. Then it is not so hard for the country mother to know about the school life of her children, for the schools are not so large but that it is possible for every mother to entertain and get acquainted with her child's teacher, that she may coöperate with the school, and all concerned are benefited thereby.

Can you tell me of any place where there is more freedom than on the farm? Freedom to come and go without permission from another, freedom to think and feel without undue pressure of public opinion, freedom from the dictates of arbitrary fashion. Some may question this last freedom, but while we have some regard for style in dress and other matters, we in the country do not judge so much by apparel or possessions as we do by real worth of character. I do not think we appreciate this freedom, nor realize how, because of it, we can be our own selves, because of it we can give our thought to things of self.

Then, where but in the country can we so cultivate our love of beauty? How many times in the early spring do we pause for an instant to admire the lacy green of the new-leaving trees, or hunt for the songbird among its branches? Or where but in the open can we watch the cloud shadows chase each other across hill and meadow? Or at evening with the children find pictures in the clouds? We see the various works of God on every hand, the color of the flower, the symmetry of the trees, the fragile daintiness of the butterfly, the beauty of the waving fields of ripening grain, the grandeur of the sunset, the quiet solemnity of the starlit sky. And so, I think farm life is conducive to real religious life. We know from our actual experience that "As a man sows, so shall he reap," and that "We cannot gather figs of thistles." If we are thoughtful at all we know that this applies to the deeper, the unseen things as well. And in the country church the woman of the farm and the men as well may join together in worship, find inspiration for service, and so, in home and community do their part in lifting the world to a truer way of living.

Life on the farm? What is life any place? Just a time given to earn a livelihood? Work? Yes, we needs must work, on the farm or elsewhere, but the work is not the end and aim of life; work is the lighter when our aims are beyond the mere labor.

An old mountaineer was perfectly content to cultivate his five acres of corn. True, he and his family lived in one room and a lean-to, and subsisted on pork and corn, but he did n't see any use in planting ten acres when they could manage to get along with five; and then he had so much more time to rest, and he did like to rest. He would sit by the hour in his rickety old chair tilted back against the cabin "resting." The county agent came along and, after several seasons spent in allaying the old man's suspicions, finally succeeded in persuading him to make a visit to town, the guest of the county agent, where he and his helpful interested young wife did their best to give him a good time. He was polite but not very much interested in many of the things by which they sought to entertain him, but he did enjoy hugely and persistently the Morris chair. When they went down town he wanted to know where he could get a "cheer" like that one, and when shown was amazed at the price. The next spring when the county agent was again in that section he was surprised to learn that the old man had fifteen acres of corn in fine condition. He was going to have "a cheer to rest in" and was willing to work for it, as it was the only way for him to get it. Of course, he got it, and in its train followed other improvements so that all the family could rest, too.

The slogan of the institute is "Community Welfare," and an up-to-date slogan it is, too. All our advantages and enlightenment and added conveniences bring opportunity and responsibility for service. We are living in a day of unrest; the forces of good and evil have been more definitely arrayed against each other than ever before. The temperance movement has challenged John Barleycorn and the end of the fight is drawing near. The Red Cross and the Y. M. C. A. and Y. W. C. A., the Boy Scouts and the Campfire Girls, the young people's societies and brotherhoods in every church—these are some of the forces recently organized to combat the forces of evil. And we farm women are interested in these things, for our boys and our girls will be helped or hindered by the environment in which they find themselves.

The woman on the farm occupies such an inconspicuous place

that she may think she doesn't count. The women of Glenwood organized a mother-daughter canning club a few years ago from just a community of average country women. They canned thousands of quarts of fruit and vegetables, and became the inspiration for the whole country to help in food conservation as a war measure, by saving what otherwise would largely have gone to waste. These women, along with providing good, nourishing food for their families, furnished a wholesome interest for their growing girls and established fellow-

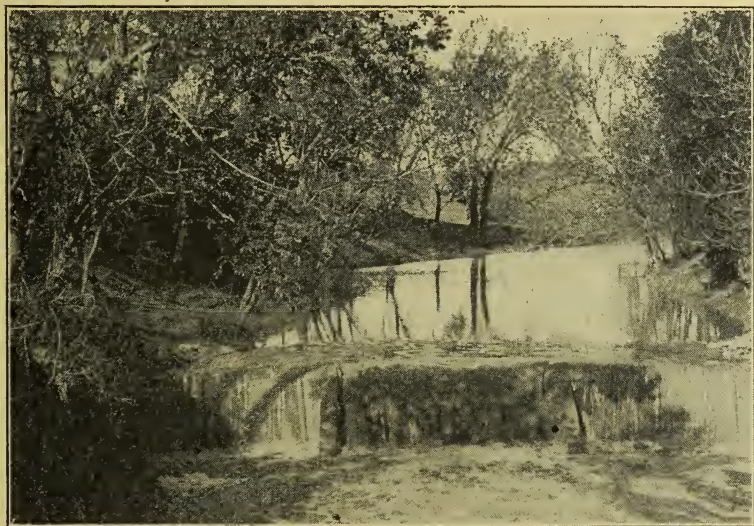


FIG. 36. Cool, shady nooks are the privilege of the open country.

ship with them, to the everlasting benefit of both mother and daughter.

In any community where there is comparatively little change, there is a tendency to form cliques. While it may be true that old friends are best, it is also true that we are broadened by contact with people of many types. This Glenwood community was no exception to the old-settler type of neighborhood, but in their enthusiasm for the club to make a record with the number of quarts canned, the cliques were forgotten. Incidentally they built up the church into a live flourishing condition, and all the moral forces of the community were strengthened by their efforts.

A normal woman's home has always been and is yet her

chief interest. And it seems to me that nowhere is the opportunity for building the ideal home better than in the country nowadays. Nowhere else do you find a more real partnership between husband and wife than in the business of farming, for the work of the one is as necessary to the welfare of the firm as the work of the other. Nowhere else can the children, without harm to their growing young bodies, help in the business, working under the parent's direct watchfulness and supervision, that all—father, mother and children—may share in the playtime later on. We have profited by so many of the labor-saving devices in the house as well as on the farm, that labor is not so confining as it used to be. True, we are as busy as busy can be, but how many days in a week do you women give to activities outside the home?

Our feeling of home has been stretched in the last few years, stretched to take in our home community at least. And so as we take thought for our homes, to make them stand for love and truth and high ideals, we shall also have the welfare of our community upon our hearts.

MAKING NEW GARMENTS FROM OLD.

By INA F. COWLES, Kansas State Agricultural College, Manhattan.

DURING the progress of the war, while our soldiers were doing their patriotic duty at home and across the sea, we, who were still going about our regular routine of work, felt that we had a duty as important though more commonplace—that of conserving in every possible way.

Since the signing of the armistice, we perhaps are thinking that we are free to conserve or not, just as we please. But it must not be forgotten that there is still much to be done; that there is still great need among the people who knew the actual presence of war as we can never know it. We must still buy war saving stamps; subscribe for another liberty loan; and save food in order to supply the European people.

The fact should be emphasized that we must also help Europe in her shortage of clothing material. France, Belgium and Russia have all been textile producing countries, but they will be able to do nothing for at least another year and probably longer. It is estimated that 21 percent of the cotton spindles and 45 percent of the wool spindles are unproductive at the

present time. Since the supply is thus bound to be less, it becomes a duty to make the most of what we already have.

We may do much to conserve clothing by a very careful consideration of the amount needed and by giving thought to the selection as to color, durability, style of making, etc. But we should not think of these points in relation to new garments only. By careful planning, it is possible to make use of much material laid aside as past its usefulness. There is a certain feeling of satisfaction in knowing that you can take something looked upon as worn out and make from it a garment which is useful, pleasing to the eye, and up-to-date. Many times it requires more thought and ingenuity to obtain the best result in doing this than to make a satisfactory garment from new material.

Before attempting to remodel, a number of things should be considered. How much time and energy is needed to do the work? Have we that time and energy? If so, is the material worth that expenditure? If we have not the time and energy, is the material durable and beautiful enough to pay a reasonable price for having it made by some one else? Is it necessary to combine some new material with the old? If this is true, thought should be given to the selection, using something that is not too expensive for the old goods, and that will harmonize in color and texture. Will the garment be durable and attractive when finished?

Wool garments repay to a greater degree than do silk, cotton or linen, the time and money spent upon them, as they are more durable and usually more expensive to begin with. There should be a very definite idea in mind as to just what can be made from the old garment and as to how the different parts of the new can be cut from old pieces, thus making it, in some cases, unnecessary to rip all the seams. If it does seem best to have the garment all apart, time may be saved by cutting the seams, but before that is done we should be absolutely sure that it can be done without using cloth needed in recutting.

Perhaps some of the simplest articles which can be remade are in cotton materials. Sheets which have become thin in the center may be cut and the outer edges sewed in a flat seam then the former center hemmed. They might also be made into pillow cases. Pillow cases, made from the tubing, which have become worn where the head has rested, may have the ends

ripped, and the case turned so that the original sides are in the center, thus equalizing the wear.

Undergarments made from muslin or longcloth seldom pay for remaking as they usually are worn until too thin to stand further wear.

However, in some cases, where a gown has worn out around the neck and armholes, leaving the lower part in fairly good condition, a teddy bear, a chemise, or a petticoat for a shorter person may be made, as well as a slip or gown for a child. The heavy knit union suits can be used to good advantage in cutting little suits for the baby or small child. This of course requires seams, which should be stitched flat.

Fine, thin shirt waists which usually become worn around the neck, armholes and shoulders may be made into corset covers by removing the sleeves, cutting the neck low and trimming with a simple edge.

Cotton skirts which have become worn at the top or bottom or have been outgrown may be cut off in both places and gathered into a band and hemmed for little girls to wear with their middies. If, on the other hand, length is needed, a yoke may be added at the waist line, or at the lower edge of the skirt a facing of some harmonizing material may be placed on the outside, trimming as well as lengthening the garment.

Like shirt waists, men's percale or madras shirts wear first around the neck and armholes, across the shoulders, and at the elbows and cuffs, leaving the lower part of front and back in good condition. From these, blouses for the little boy, sleeveless aprons for the small girl, little dresses for the baby or small aprons for the women may be made. If not too thin across the shoulders, a shirt of this kind may be fashioned into a short sleeved, slightly low necked waist for the girl or woman, adding a shaped collar and cuff of some other material.

Linen in any form whatever should not be thrown away. Large table cloths which have worn thin in the center or where the edges strike the table may be cut up into smaller cloths, lunch cloths, doilies, or napkins and the smaller pieces saved for bandages, etc.

Stockings, the legs of which are still whole and strong, may be used in a variety of ways. They may be refooted with material from the legs of another pair, or sometimes it is possible

to buy new feet to take the place of the old worn ones. They may also be cut shorter and refooted for children's wear. Creeping trousers for the baby may be made by using the upper parts of two, opening them part way down and then sewing them together back and front. The ribbed part of men's sock make good wristlets, and may be finished by crocheting across the raw edge.

Wool materials need, in some ways, different treatment from cotton, since cleaning and renovating processes are often necessary before the garment can be remodeled. Sometimes only a good airing and brushing is needed, but usually a more thorough cleansing is required. The garment may be sent to the professional cleaner. This is sometimes more satisfactory if done after the new garment is finished, as the heavy pressing puts it in good shape for wearing. One objection to that however is that it is not always possible to know how well the material will clean, and how much of it will be in good shape to use. Very satisfactory cleaning may be done at home with a good quality of gasoline and some of the various cleaners on the market. Most materials look well if carefully washed in warm soft water and a neutral soap or soap bark. The temperature for washing, rinsing and drying the woollen cloth should be medium and about the same for all processes, in order not to shrink or make the material harsh.

If only slightly soiled, the spots may be removed with gasoline or chloroform, instead of dipping the whole garment. If of light color, the cloth may be more useful if dyed. This may be done at home, using some of the various prepared dyes, being careful to follow directions exactly.

Some of the most satisfactory results may be obtained in making dresses from coat suits, especially those of simple lines. In selecting a pattern for the dress, choose one which has somewhat the same lines as the suit. These lend themselves particularly well to dresses with Russian blouse or jacket effects. A closer fitting is usually required in sleeves and waist, but many times they need little additional change other than in the collar, cuffs, belt, and perhaps in a vest effect. Attractiveness may be obtained by combining with silk or georgette, if the material warrants additional expense.

The accompanying sketches show what may be accomplished in this line.

The two dresses were made from practically the same style suit, shown in No. 37, differing only in size, color, length of coat



FIG. 37.

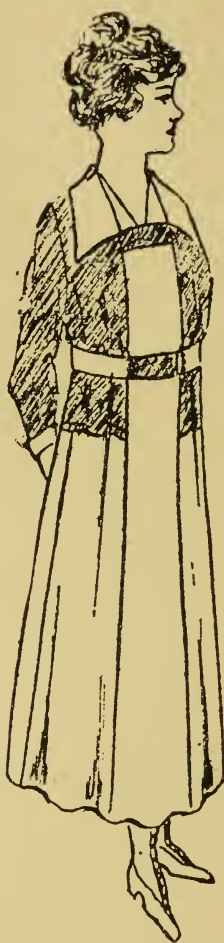


FIG. 38.

and number of gores in the skirt. The suit from which No. 38 was made was originally a cream colored whipcord, and was worn and cleaned many times. After being ripped and dyed, it was combined with new silk, making a one-piece dress for a slender person.

The dress pictured in No. 39 had, as a suit, the same lines as No. 37, except that the coat was longer and the skirt had many gores. It needed only careful washing to make it ready to remodel into a gown for a stout figure, as illustrated.

Women's heavy coats may be cut down into coats for children, while from the light weight spring wraps one-piece dresses as well as coats can be made.

But because we have mentioned such a variety of garments which can be remade from clothes of women, we must not think that men's clothing, which is usually of durable, heavy material, attractive in color and design, needs to be thrown away because there is no way to use it. Blouses, coats and trousers for the small boy can easily be planned from his father's old suit. Men's sack coats have the lines of children's cloaks and will cut to good advantage from them. Little girls' dresses may even be made from men's trousers. One very attractive little dress was made from a pair of blue serge trousers, by forming the skirt of the top with the waist line of the trousers placed down, and small yokes added in back and front to give length. The side seams of the trousers were left as they were and a slot seam used in center back and front. Sleeves were cut from material in the legs. The whole was trimmed and brightened by adding a little inset vest, collar, cuffs, and belt of scarlet flannel from a cast-off middy blouse.

These are only a few suggestions as to what anyone with a little ingenuity and experience can do in the way of "making new garments from old."

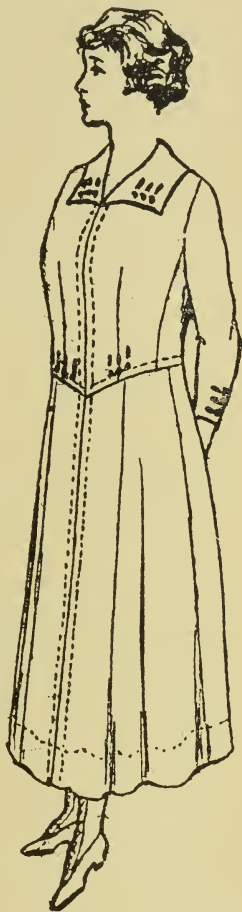


FIG. 39.

HARVEST TIME IN THE KITCHEN.

By MARY W. McFARLANE, Division of Extension, Kansas State Agricultural College.

THE returning springtime brings to our attention the perennial problem of the harvest season, and the thoughtful housewife begins early her planning for the coming of the threshers. The problem of caring for the hungry harvesters has two aspects for the housewife: what shall be given them to eat, and how it shall be prepared. The cost of foods is such just now that it taxes to the utmost the skill of the cook to be both bountiful and economical.

At harvest time we all take a pardonable pleasure in setting a good table. In the past we have been very lavish in the way we heaped before the appreciative harvesters our best, but now we must be more prudent. We as a nation cannot afford it, and there must be no waste this year of precious food. It is always a waste to serve more than people need to keep them well and happy; a waste in two ways, a waste of food and a waste of precious human energy in digesting it.

This year the housewife has a rare chance of distinguishing herself in so planning her meals at harvest time as to keep up her reputation as a fine cook and at the same time not be wasteful. How can she do this? For one thing, to be thus efficient, she must plan her meals beforehand. A few hours spent the week before the threshers come, in outlining the foods needed and available, will save more wear and worry than any other precaution she can take.

There are a few facts to be kept in mind when planning meals. For one thing there should not be a feast one day and a famine the next. Variety is very desirable, but should be distributed over several days' menus, not concentrated on one. Hunger is the sensation experienced when the stomach is empty. Meals should be of such a nature that the persons eating them need not feel hungry until about time for the next meal. Some foods digest so quickly that we are hungry very shortly after eating them. (Such foods are sweets, lean meats and eggs). But there is one class of foods that retard the passage of all foods from the stomach. These are the fats, and a judicious mixture of foods containing fats will, in threshers' parlance, "stay with one."

Threshers are working hard and need a heavy diet, so there should be plenty of potatoes and bread and foods containing starch and sugars to furnish the necessary energy for their work. There should always be some representative of all the food groups, as meats or eggs or cheese for the body-building foods; bread, potatoes, puddings to furnish energy; vegetables and fruits for the mineral and bulk foods; and fats for energy and the necessary richness or slow digestion.

Another aspect to be considered at harvest time is the saving of the precious human energy of the cook. Harvest season

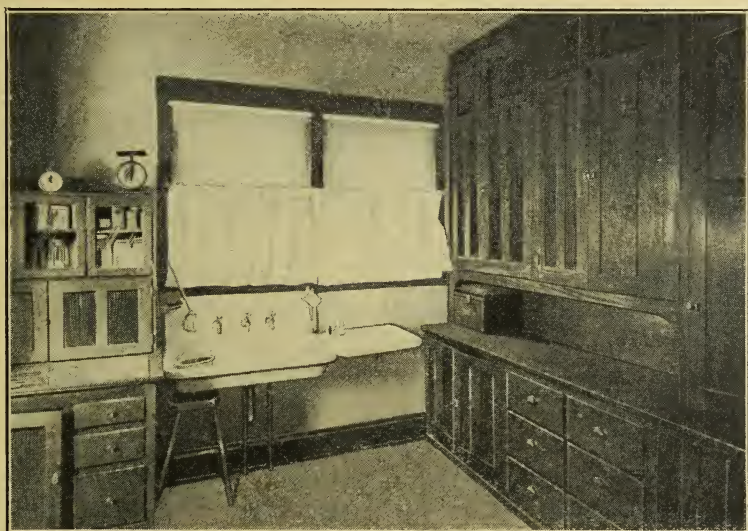


FIG. 40. A well-equipped kitchen, properly arranged, saves many steps.

with its duties is one of the most trying of the year. Especially is it a severe test upon the endurance of the woman whose family is usually small and whose kitchen is, therefore, equipped for handling foods in small quantities, and it becomes doubly difficult if the kitchen is inconvenient as well. Emergencies like this of feeding the threshers are of such constant occurrence, that they should be planned for in all farm homes. The best way to do this of course is to take up this point with the architect, but most of us cannot go back that far and have to accept our homes as they are and modify them as we can. But no kitchen is hopeless. Always something can be done to make it a better one.

In the first place, it should be so arranged as to avoid the need for the establishment of long distance pedestrian records on the part of the housewife. Instead of traveling all around four walls to assemble the things necessary to make some biscuits, all the things needed for that particular operation should be kept together at the place where they will be used.

A place should be provided in every kitchen for preparing foods and should be sacred to that process alone. This may range from the expensive built in "Dutch Kitchen," to the commercial cabinet or its humble counterpart a table with shelves above. But some one receptacle there should be where food supplies can be kept and used at the same place.

It seems trivial to emphasize this principle, but an analysis of many kitchens shows that its violation is the most common error encountered in kitchens. Many women keep cooking receptacles in one place, mixing bowls in another, food supplies in several others and waste many precious minutes and much fruitless energy in merely bringing them together at a place where they are to all be used.

Likewise, the cleaning away of a meal and its attendant dish-washing should have a place of it's own, entirely separate from the surface used for cooking. In nature these two operations are entirely distinct and when they are brought together confusion is inevitable.

Plenty of light both natural and artificial there should be in every kitchen. Working in a dim light brings about a strain that, added to the regular burdens of housework, is "the straw that breaks the camel's back."

But perhaps the greatest help that can come to the tired cook is the adjustment of her working surfaces to her height. A definite ratio exists between the height of the table and the height of the worker. Plumbers left to their own initiative are apt to put sinks, lavatories, etc., so low that the worker must bend over to use them. This is a wicked and a needless strain. Ironing boards, sinks, tables, and in fact all working surfaces, should be adjusted to the height of the worker. A tall woman cannot in comfort use the same height of table as her shorter sister, who in turn is greatly handicapped by having to use her shoulder muscles entirely, where her working surfaces are too high.

Below is a table of heights taken from Mrs. Christine Fredericks book, "The New Housekeeping":

Height of woman.	Proper height of working surface.
4 feet, 10 inches.....	27 inches
4 feet, 11 inches.....	27½ inches
5 feet	28 inches
5 feet, 1 inch.....	28½ inches
5 feet, 2 inches.....	29 inches
5 feet, 3 inches.....	29½ inches
5 feet, 4 inches.....	30 inches
5 feet, 5 inches.....	30½ inches
5 feet, 6 inches.....	31 inches
5 feet, 7 inches.....	31½ inches
5 feet, 8 inches.....	32 inches
5 feet, 9 inches.....	32½ inches
5 feet, 10 inches.....	33 inches
5 feet, 11 inches.....	33½ inches

The one thing most important in the usefulness of any kitchen is running water in some form. This ranges anywhere from the plebeian barrel and pump to the most elaborate of water systems. Those classed as inexpensive are truly so and anyone who can afford a home at all can afford some form of a water system. Details of these can be had by applying to the engineering departments of any agricultural college.

Some provision must also be made for keeping food cool. Several forms of homemade refrigerators are available, and directions for making these can also be had at the home economics departments of our state colleges.

A wheeled tray or a table on rollers is a great labor-saving device, as foods and dishes can be quickly and easily transported from one room to another, thus economizing time and steps.

Some of the cooking devices, as the fireless cooker, the pressure cooker, and the steam cooker are of great assistance in busy seasons. The fireless cooker cooks certain foods with a small amount of actual heat, since the cooking is begun on the stove and finished by a rigid conservation of this original heat by means of insulation, supplemented by radiators of soapstone. Directions for making this can be had by applying to the Department of Home Economics, Extension Division, Kansas State Agricultural College, Manhattan, Kansas. The pressure cooker by the utilization of steam under pressure cooks very tough substances, as cheap cuts of meat or woody vegetables, quickly and thoroughly. The steam cooker if of ade-

quate size, cooks a number of things with one fire, thus economizing heat; an important point in a kitchen in summer.

A time of preparation, when the problems connected with harvest time can be anticipated and prepared for, both in foods and equipment, is well worth while, and is after all, the best way of meeting the difficulties attendant upon the coming of the threshers.

RURAL ENGINEERING.

ELECTRICITY ON KANSAS FARMS.

By C. M. HARGER, Abilene.

A LONG with its other development Kansas is rapidly acquiring a wide utilization of electric current. From power plants only for the larger cities it is extending the service to the smaller towns, and in the past two years has made strides toward giving to the farm a cheap and efficient service that promises to become as general, where conditions permit, as the use of the rural telephone.

This has become possible through the reorganization of power distribution, supplanting the isolated single town plant with a central power station extending its lines to scores of communities, and lessening the cost of both by larger use of water power and by elimination of much labor expense. This process is going on so rapidly that small villages that never have been able to enjoy electric current are being given a twenty-four hour service equal to that of any city in the state. Others that have found a local plant both expensive and inefficient are buying their current from a central station, distributing it locally, securing cheaper power and lighting and adding urban conveniences to the neighborly surroundings of the semi-rural setting. Unquestionably it is doing much to make life pleasanter in these communities, and giving greater comfort to their dwellers.

Growing out of this modern idea has come, in a few months, the extension of electric lines to farming communities. Farms along the lines leading from the central plant to outer towns were first to gain the service, but lines are being run along country roads especially for the service of farms, and so popular and efficient has proved the new farm servant that the chief difficulty of the companies is to build new lines as rapidly as they are demanded by the farm owners.

The most important development of this kind is in the east-central counties where the Riverside Light, Power & Gas Company, together with the Rocky Ford Milling and Power Company, as a type of farm service, cover an extensive field. The

former company has a water power on the Smoky Hill river, two and one-half miles southeast of Abilene; the latter at Rocky Ford on the Blue river, four miles north of Manhattan.

Both plants are under one management, and are combination hydro-electric and steam-electric power plants. They are connected by a 33,000-volt transmission line permitting the operation of both in synchronism when demand requires. Occasionally it becomes necessary to close down one plant for repairs, and in such cases the plant operating supplies the current to the combined territory, insuring all towns and farms a continuous service.

The lines reach into ten counties from Brookville on the west to McFarland and Wamego on the east; from Miltonvale and Cleburne on the north to Lincolnville, Tampa and Bridgeport on the south. Forty-five towns, including Camp Funston, are now receiving current from the combined plant, making it the most extensive distribution from any central plant in the state.

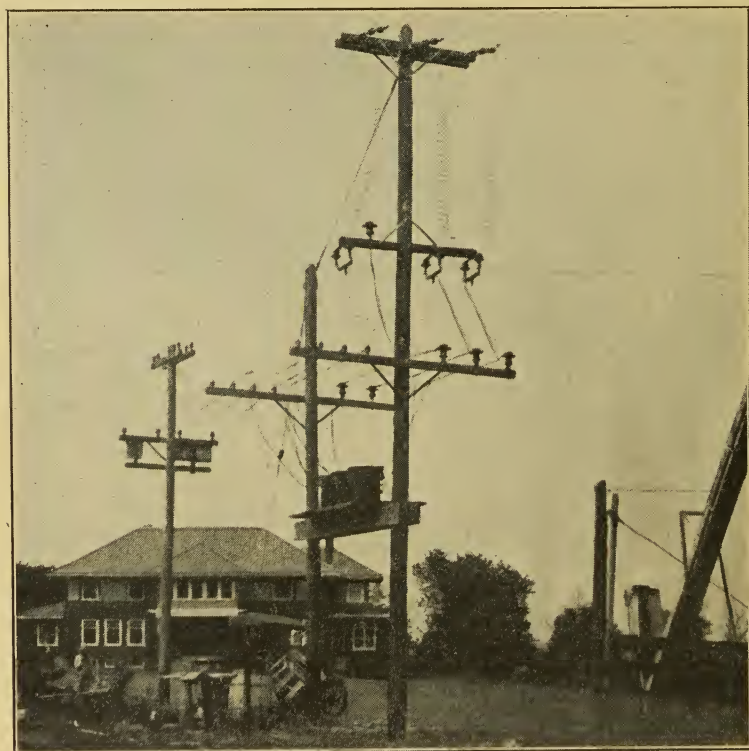


FIG. 41. A permanent transformer at the farm.

The encouraging feature about it from a business view is that it is entirely the product of Kansas money, having been entirely financed within its own territory, with an investment of over one million dollars.

Along the transmission lines which reach the various towns are the farm subscribers. Branches also lead from these in every direction, wherever there is demand for the service. On January 1, 1919, 357 farms were thus furnished with electric current. About 200 of these are round Abilene, 100 or more near Gypsum City, and the remainder in other sections of the territory. More than 100 farm owners were on the waiting list, seeking the installation of lines to their homes.

The development of the farm service has brought some established changes, necessitated by the conditions as they have been found by two years of growth. Practically all the farms have been connected since June, 1917, making it a comparatively new venture and requiring adjustment to costs and demands.

For instance, at the beginning the current was supplied at a pressure of 2,200 volts, but as the business developed, and the farmers began to realize the convenience of electric power on the farm, they purchased grinders, ensilage cutters, threshing machines, irrigating systems, water systems for house, barn and feed lots, etc., constantly increasing the load on the lines. It became necessary to increase the voltage to 6,600, and in some instances to 11,000, which has been found sufficient for any operations desired by the farmer.

One line built exclusively for farms has eighteen farms connected; another has thirteen, and these are being extended. Special lines can of course be built from the plant, but it is too expensive for a single subscriber, so it has been found most economical to require that at least three farm homes to the mile be attached to a line. Groups of farmers thus coöperate in the expense of installation.

The schedule of costs to the farmer, when there are a sufficient number to warrant extensions, begins with an installation charge of \$380. This covers the line construction, transformer installation, drops, and meter at each subscriber's residence or farm, served from the high tension transmission line, together with whatever proportion of the investment is to be borne by such connection, including plant overhead and office expense,

and the first year's current up to five-horse-power connected load, the last being at regular flat rate for such service, \$2.50 a month or \$30 a year.

The lighting and electrical wiring of a house depends on the taste of the owner. The average farmer puts \$50 to \$75 into fixtures and wiring. The line to the barn, taking in the chicken house and garage on the way, may cost \$35 to \$50. Then there is a wide variation in the expense placed on the barns and yards. Before he gets through with it, however, the farmer usually has not only a complete wiring of the premises, including the dairy barn, hog barns, hay barn, and plenty of light in the open spaces of the yards. Usually a light shines from the top of the windmill, a visible advertisement of progress to passers-by. Furthermore it lights up the premises and adds to the convenience of the farm.

Motors for the barns cost \$25 to \$100 each, and usually there is one for grinding, one for pumping, and one for corn shelling or feed chopping. The house needs two or three motors for sewing machine, washing machine, etc. So an average initial expense for the Kansas farm, not a big show place, but a moderate livable farmstead, is:

Installation	\$380.00
House wiring, fixtures and apparatus.....	100.00
Motors, barn	100.00
Motors, house	50.00
	<hr/>
	\$630.00

Next to be considered is the cost of current. The rural rate begins at fifteen cents a kilowatt, diminishing to five cents, according to quantity used. The minimum rate is \$30 a year—\$2.50 a month. The cost depends of course on the use to which the "white coal" is put. If there is much ensilage-cutting in autumn, or threshing in summer, or if cattle feeding calls for a great deal of grinding and pumping, the cost runs up—but this simply takes the place of gasoline engine or other power to fulfill the purpose. Farmers retire early and their evening light bill is much less than that of the city dweller. Of the 357 farms now connected few use more than the minimum; some exceed it, usually because of the extra work to which the service is put. Here are some figures taken from the books of the company for a series of summer and autumn months for the complete year 1918, just as they came in the records, showing

what representative farmers have actually paid during the period stated:

	<i>August.</i>	<i>September.</i>	<i>October.</i>	<i>November.</i>	<i>Year 1918.</i>
Eshelman, A. L.....	\$7.20	\$8.30	\$5.90	\$5.40	\$48.08
Muench, Fred	16.20	10.70	11.90	8.63	72.13
Kyle, H. G.....	7.50	5.60	4.00	4.10	46.20
Brenizer Bros.	5.60	6.30	6.90	8.00	80.40
Rush, Geo.	3.30	1.80	3.50	3.60	32.60
Schooler, Carl	1.60	2.50	2.50	2.60	33.90
Dickinson, Lee	2.50	3.40	5.30	5.30	31.10
Green, R. M.....	2.80	3.20	3.30	3.50	39.88
Garver, C. M.....	2.30	2.70	2.50	5.30	32.00

The records above are for four late summer and early autumn months with the total paid by the users for the entire year, 1918. Brenizer Brothers have a large stock farm, and use motors in many feeding operations; Mr. Muench pumps water and runs a milking machine for a considerable dairy, accounting for the larger cost of the current on these farms, compared with the usual farmstead.

What does the farmer and his wife get out of this investment? Does it pay in labor saving, convenience, and efficiency? The farmers who have installed current think it does—at least none has suggested that he desires it removed.

Take the house and the housewife. The farm wife has for years struggled with her duties little relieved by assistance. It is next to impossible to keep a maid on a farm—it is difficult enough to secure one in town. The housewife and her daughters must do their own work. With the electric current she finds first that the lighting problem is cared for—no more lamps to fill, no apparatus to watch if a system of artificial light has been used. A vacuum cleaner solves the sweeping, and hard wood floors and rugs are becoming as common in the country as in town. The sewing machine, washing machine, and wringer are turned by the movement of a switch. The electric iron does away with much of the terror of ironing day, besides saving fuel. The toaster and percolator do their share to lighten the burden. Electricity is not yet cheap enough to use for general cooking, but perhaps that will come too. All in all, except for cooking gas, the farm wife has every convenience that her town sister enjoys. Probably she gets more saving in steps and labor from the current than does her husband, for she has never before been able to lighten her burden perceptibly, so far as physical exertion is concerned.

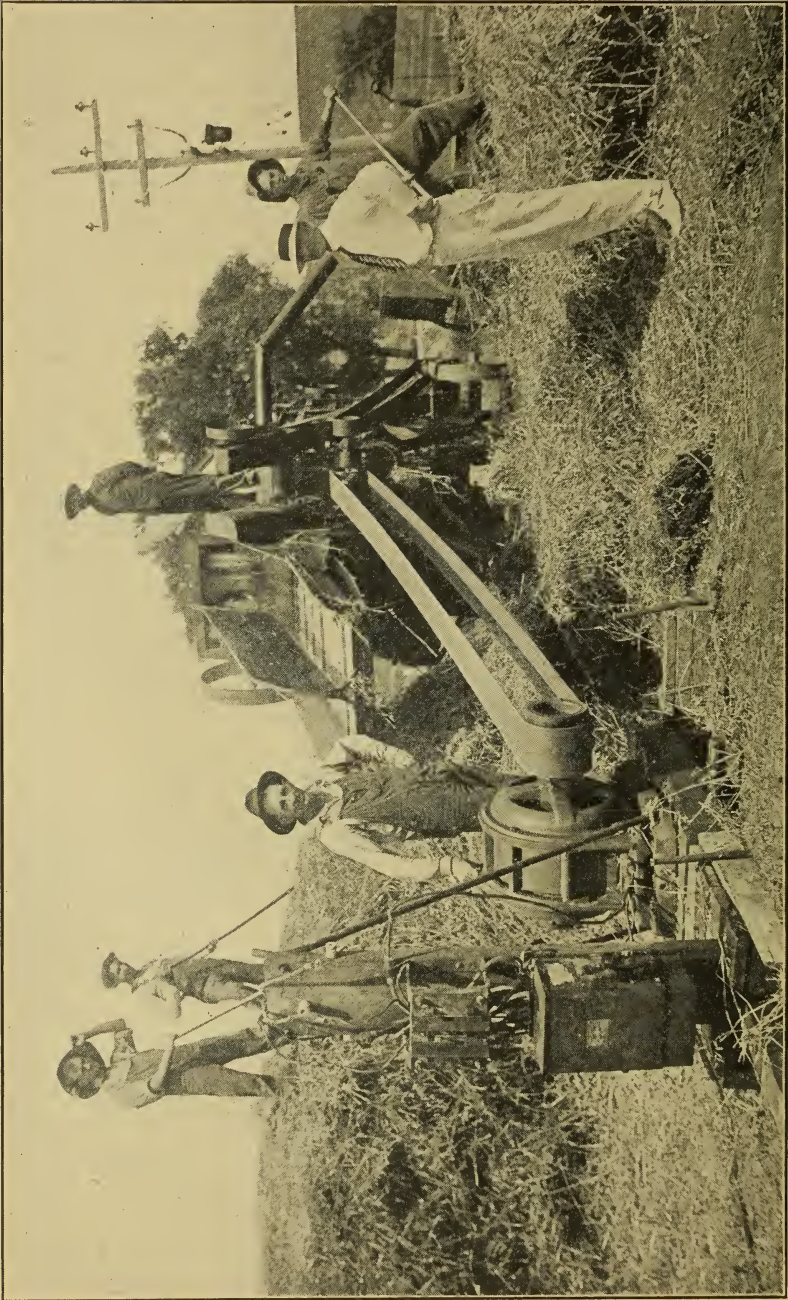


FIG. 43. Threshing alfalfa seed by electricity.

The farmer himself in late years has had the advantage of gasoline engines for much of his power needs. He has pumped water when winds were lacking; has run the grinder, sheller, and other equipment of the farm yard. But he carried a fire-setting lantern in "doing chores," and ran a perpetual risk of seeing his barns go up in smoke. With wires run through the buildings he works to advantage and with comfort. The turn of a switch starts the pump—and that task is usually handled from the porch of the house, an easy duty for the wife when he is in the field or in town.

When it comes to ensilage cutting or filling the silo, he may find it necessary to hire from the company a larger motor, and this is far cheaper than securing a big traction engine with two or three extra employees, to say nothing of the simplicity of the operation.

Last summer fifteen farmers in Dickinson county did their threshing by electricity. One group of wheat raisers located on transmission lines owns its own machine and motor, using it coöperatively. Others hire from the company their equipment, consisting of a transformer set on a truck, a long cable, and a motor. The transformer is set at the road and the cable stretched to the wheat stack where the motor furnishes power to the separator. To say nothing of the lessened risk of fire, there is a saving of the engine crew, water haulers and fuel, as well as a smoothness and steadiness of operation of the separator that secures the best possible results. It is a long carry from the old-time horsepower with its weary, sweating teams, its farm boy driver and its clatter and roar, to the humming motor singing the song of the golden wheat—but the Kansas farmer has negotiated it.

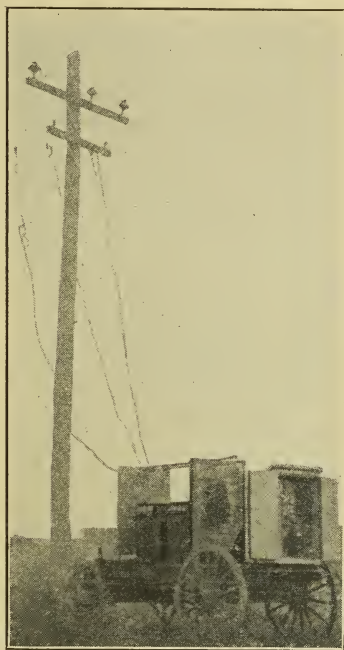


FIG. 42. This is a portable transformer, which may be attached anywhere.

The utilization of electricity on the Kansas farm is in its infancy. Together with the adaptation to the pumping for irrigation in southwest Kansas, its growing use in the oil country, where hundreds of oil wells are being emptied by motor driven pumps, the farm is offering a great field for "white coal." To some extent its development depends on the proximity of water power, and western Kansas cannot secure its advantages as cheaply as can sections where rivers are available. In the latter section is opportunity for tremendous expansion and, as the transmission lines are steadily extended, reaching across the prairie to additional towns, and branch lines traverse the country roads, we may look forward to well-nigh as universal use of electric current on farms as exists to-day in the city.

That it will prove an important incentive to greater contentment and solve some of the problems that face the farmer as he seeks to hand down his land to the next generation, is unquestioned. This, if nothing more, means a boon to Kansas agriculture. With the growth of tenantry facing our economic conditions, it is essential that there be modern methods in farming if the land is to attract the coming generation. The long hours of physical weariness involved in handling the machinery of the farm are eliminated when there is an electric current and whirring motors to perform the tasks. The farm thus equipped sees none of the back-breaking toil that was the portion of the boys, and helped to weaken their interest in crop production and stock handling. With the tractor on the way to general use, and the automobile already here, the electric service completes the material with which farming can be shorn of its drudgery while the boy is interested in the operations of machinery as a mere mechanical instinct. It is making farm life easier, and though its possibilities vary with the fuel and water power conditions, there is no part of the state where proper systematization cannot bring its service to every farm.

GAS ENGINE TROUBLES.

By VINTON V. DETWILER, managing editor, *Tractor and Gas Engine Review*,
Madison, Wis.

MOST of the gas engines on the market will work well and give good service if they receive intelligent care, and none of them are so complicated as to be difficult to understand. If your engine does not operate properly, one of three things is wrong; the proper amount of fuel of the proper mixture is not being delivered to the cylinder, the compression is not right, or something is wrong with the ignition. A systematic search almost always will bring the trouble to light in a few minutes.

It is unwise for any farmer to operate a gas engine until he understands the function of every part of it. The ordinary farm engine does not have so many parts but that one can study each part carefully, and thoroughly understand its function in a comparatively short time, even though he has had no previous experience with engines.

Gas engine instruction books receive a minimum of the attention they deserve. I remember the first gas engine I set up and operated. I knew nothing about it except that you put fuel in the tank, closed the switch, and cranked it. I was so eager to see it run that I started it up before it was mounted on its base, and I did not take time to open the instruction book at all. Both the engine and I escaped without any serious damage, but there might very easily have been undesirable results.

If the purchaser of every farm engine, who has not had experience, would sit down and study the instruction book for a full day before trying to start the engine; if he would locate every piece of mechanism on the engine and find out from the instruction book what this mechanism is supposed to do, and how it should be adjusted and why, he would get more satisfaction and financial returns from his investment.

Just at present one of the readers of our magazine is trying to adjust a difficulty with the manufacturer of a well-known gasoline engine. The whole trouble could have been avoided if this man had taken time to learn something about the engine before he tried to start it. It would have taken only a few hours for him to do this. In this particular case a burr became

loose in shipment, or was not properly tightened when it left the factory, and when the man started his engine a smashed governor was the result. For several months he has been carrying on a more or less ill-humored controversy with the manufacturer and he has been doing without gas engine service that he should have. The manufacturer has agreed to put this engine in perfect repair without charge, but the whole thing takes time and is hard on the disposition of everyone concerned. In this particular instance the manufacturer may be to blame because everything was not in perfect adjustment when it reached the user. But the user also was to blame, because a little intelligent study before the accident, instead of afterwards, would have prevented the difficulty.

Even if one has made an intelligent effort to understand the peculiarities of his particular engine, there will come times when it will stop or will refuse to start. Sometimes the difficulty is hard to find, even though a person is quite familiar with internal combustion engines. In most cases, however, this is not true. Often you hear a man say that a gas engine is one of the most contrary things he knows about. It will balk and he will sweat and cuss over it for a while, and finally it will

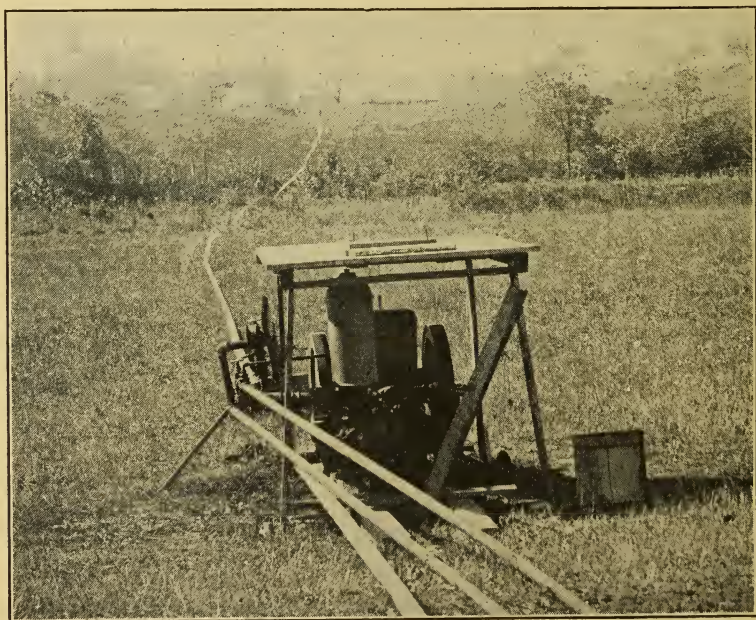


FIG. 44. Pumping water for a country home.

start without anything in particular having been done to it, so far as he knows. In nine cases out of ten the man who talks in this manner hunts for trouble in a hit-and-miss fashion. He monkeys with this and monkeys with that without any definite plan of search for the trouble.

Remember, when your engine stops that one of three things is wrong; *the cylinder is not receiving a proper charge of fuel; the fuel is not being properly compressed, or there is an imperfect spark at the spark plug.* Probably in the largest number of cases the trouble is with ignition. Carbon is deposited in all internal combustion engines, and in many farm engines there is enough carbon deposited so that the spark plugs will become foul occasionally, or premature ignition will be caused by carbon deposits becoming white hot and igniting the incoming charge of fuel before the proper time.

If you suspect that your ignition system is causing the trouble, first test the spark plug. This may be done easily. Unscrew the plug, lay it on its side on the hopper or cylinder of the engine, and with the connections tight so that the current will be delivered to the plug, turn the engine over slowly until the point of ignition is reached. If a spark is being delivered at the plug it will be seen at once. If there is no spark, hunt the trouble. If the trouble is simply a fouled plug the operator probably will have cleaned it without making this test.

The spark should be bright and fat. You might get a spark in the open air with this test that is very thin and blue, and it might be possible that in the conditions under which the plug must work in the cylinder, surrounded by compressed gas, a spark would not be delivered. If the spark seems poor or if there is no spark, follow the connections from the plug to the coil and batteries, or to the magneto, and be sure that all of the connections are firm. If the connections are all right and there seems nothing else to do, examine the adjustment of the coil or of the magneto. Do not fool with the adjustment of either the coil or the magneto until you feel sure that you can make the examination and put things back as they should be.

If you decide in the first place that the trouble is in your ignition, go over the ignition systematically from one end to the other before you begin monkeying with other parts of the engine. If you decide that your trouble is probably due to an imperfect fuel mixture, go over every detail of the fuel system

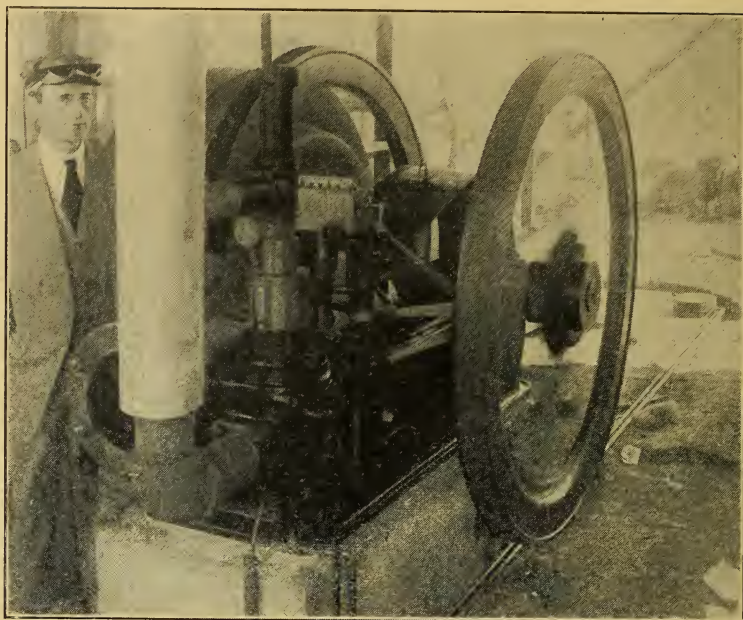


FIG. 45. A type of oil engine used in irrigation pumping.

before you start on something else. Above all, do not spend your time turning the crank. If an engine will not start with a moderate amount of cranking it is useless to keep on. It is possible, although not wise, to start a stubborn mule by continued twisting of its tail, but this is something that certainly does not apply to gas engines. After you have located the trouble and corrected it, the engine will start the first time you turn it over.

Suppose we consider a few gas engine troubles and their symptoms. Perhaps your engine misses on high speed but runs all right on slower speeds. If you are using a battery ignition, you can expect to find upon test that your batteries are weak. If you do not have a battery tester the weakness probably will be shown by testing the spark plug as previously described, the spark being thin and blue. Supposing your engine is running along smoothly and very suddenly stops; the trouble probably is due to a broken wire, loose connection, or some other trouble in the ignition system. Of course, it might also be due to trouble in the fuel system, but it is not very often the case that the fuel system will be so suddenly clogged as to

stop the engine without any warning. When carburetor trouble develops it is much more likely that the engine will cough, sputter, and stop more slowly.

Occasionally an old engine will miss for several explosions until the engine almost stops, then it will start to run again and pick up speed. Very often in cases of this kind it is discovered that the engine is equipped with hit-and-miss governor, and that the governor is sticking.

Suppose the engine starts out by running nicely for a few minutes and then stops; the trouble may be located in the fuel system or it may be in the ignition system. If a set of batteries is very weak they will perhaps recuperate enough if they stand for some time, so that the engine can be started and operated for a few minutes and then the current gradually will become too weak. If the engine can be started again, very soon, the trouble probably is not weak batteries. It is more likely to be a clogged fuel line or carburetor.

This reminds me of a very unusual experience reported to us some time ago. A farmer was sawing wood, and in order to keep the belt from blowing off, as the day was windy, he set up a stake near the engine pulley, for the belt to rub against. He tied the top end of this stake to a tree limb with a piece of rope. After running a few minutes the engine stopped. The operator looked it over, saw nothing wrong, cranked it, and it started running as well as ever. In five minutes it stopped again, but started immediately on being cranked. The men worked most of the afternoon, accomplishing very little work and acquiring very savage dispositions and furious vocabularies.

It happened that a factory expert was in that part of the country and the farmer got him to come over and look at the engine before the afternoon had passed. The repair man examined everything carefully and could not locate the trouble, but the engine continued to stop at more or less frequent intervals. Then an old fellow, who was watching the factory man work, located the trouble. The rope used to tie the top end of the stake to the tree hung down just far enough so that the wind could swing it close to the air intake of the carburetor. Then the knotted end would be drawn over and cover the air intake. The suction would hold the rope in place until the engine stopped, and then it would swing back out of the way.

This is mentioned, not because anything of the sort is likely to happen, but simply to illustrate an exception to the general rule that a systematic search will show the trouble.

Very often the trouble experienced with gas engines is in starting. If the spark plug is all right and there is plenty of ignition current, the difficulty probably is in the fuel mixture. There may be either too little gasoline or too much gasoline. There is no more sure way of preventing a gas engine from starting than to get too much gasoline in the cylinder. There may be too little gasoline. This can be remedied by making

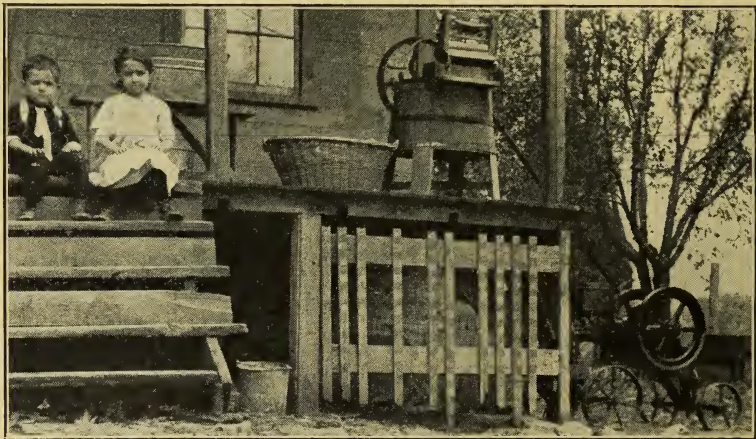


FIG. 46. The family washing done by engine power.

sure that gasoline is flowing into the carburetor and by priming. If a poor grade of gasoline is used it is well to have some high-grade gasoline on hand to prime with. Some of the gasoline on the market now is so poor that it is difficult to make it vaporize in a cold engine. Especially in the winter time it sometimes is difficult to start with this poor fuel. If you always have difficulty in starting and have no difficulty after the engine is warmed up, it may be that this is your trouble.

If the engine does not start immediately, many persons will prime and crank and prime again. It does not take long to get enough gasoline into the cylinder so that the mixture is too rich to explode. There may be enough in the cylinder so as to soak the spark plug and make it impossible to get a spark. If the engine is in this condition, open the relief cock, or hold the intake valve open, and turn the engine over a few times

with the fuel cut off. This should clear the cylinder of excess fuel and it should be possible then to get an explosion.

A very lean mixture does not burn well. The charge burns slowly in the cylinder, and consequently, when it is time to take in the next charge, the cylinder is full of burning gas, and when the inlet valve opens the flame shoots back through the carburetor and produces the phenomenon known as back firing. After the engine has become warm it is possible to operate with a leaner mixture than when starting, and it is very desirable to do so, both because of economy of operation and because of the smaller amount of carbon deposited in the cylinder.



FIG. 47. The gas engine used in filling the silo

After the engine has been running long enough to get hot, open the air intake slowly until the engine begins to miss or back fire, then close it just a little and it will be set for the greatest economy and most satisfactory operation.

If an engine over-heats without there being apparent reason for it, such as excessive load, it is very possible that it may be caused by a dirty cylinder. This trouble may also be due to preignition or to a faulty mixture. A hot engine indicates that the heat is not being changed into work as it should be. The fuel is not burning at the right time in the stroke. Possibly it ignites too early in the compression stroke, or too late, and causes after burning. With the cylinder thoroughly cleaned and the valves reground, the trouble probably will disappear. The carburetor, of course, should be set so as to give a proper mixture—one which burns up clean and does not show smoke at the exhaust.

In the grinding of valves, flour of emery and oil may be used. Mix the two together, making a smooth paste; smear a little on the valve seat and then with a carpenter's brace and screw-driver, turn the valve part way around on its seat, then reverse it and keep on working it back and forth in this way until the valve is seated all the way around. Do not put very much pressure on the valve while grinding it in.

Often a gas engine user will report that an engine which has been used several years and never has given trouble has apparently lost a large percent of its power. Very often the remedy in cases such as this is a good, thorough cleaning. The trouble is due to a carbon deposit which causes a lack of proper compression. When the piston is removed, very often it will be found that the piston rings are gummed into their grooves, and after a thorough cleaning the engine runs as good as ever.

It is not necessary to have a lot of technical knowledge in order to keep a gas engine working satisfactorily. It is necessary to make use of a certain amount of intelligence and common sense. The person who has a little natural liking for machinery can keep an engine working smoothly by putting into effect the information contained in the instruction book which should come with his machine.

SELECTION AND INSTALLATION OF A PUMPING PLANT FOR IRRIGATION.

By J. B. MARCELLUS, drainage and irrigation engineer, Kansas State Agricultural College.

WITH the first settlement and boom in the Arkansas river valley, between the years 1870 and 1880, irrigation was first considered. The report of the Board of Irrigation Surveys and Experiments for 1895 and 1896 shows that Joe McAdams, of Northfield, Sherman county, Kansas, began irrigating in 1875 and was followed by L. A. Martin, of Lakin, Kearny county, in 1878. There has been a continual increase in acreage irrigated since that time, although the methods have changed.

There is now considerable interest in the use of underground water as a source of supply for irrigation purposes. With the coming of the settlers along the western Kansas and eastern Colorado streams, and particularly along the Arkansas river, there was a diversion of water into ditches. The diversion of water into the Colorado ditches was much to the detriment and to the practical elimination of irrigation by ditches in Kansas. The results of lawsuits as to water rights were unsatisfactory to Kansas irrigators. The United States Department of Agriculture in 1909 issued a bulletin on "Irrigation in Kansas," which gives the history of twelve irrigation canals covering over 100,000 acres. At that time less than one-half of this acreage was receiving water from ditches, and pumping plants were becoming numerous. With the more permanent settlement in western Kansas, increased efficiency in pumping, and better understanding of water, it can now be said that pumping for irrigation is no longer an experiment.

The number of pumping plants which now exist have demonstrated beyond a doubt that underground sheet water found in western Kansas is practically inexhaustible. This underground water flows slowly towards the east and is found in sand and gravel. The source of this water is not directly from storm water in the immediate localities, but comes from large drainage areas lying to the west, in some cases extending into the Rocky Mountains. While this supply is generally regarded as inexhaustible, continuous pumping may have the effect of temporarily lowering the water in the immediate vicinity of the pumping plant, though the supply is quickly replenished.

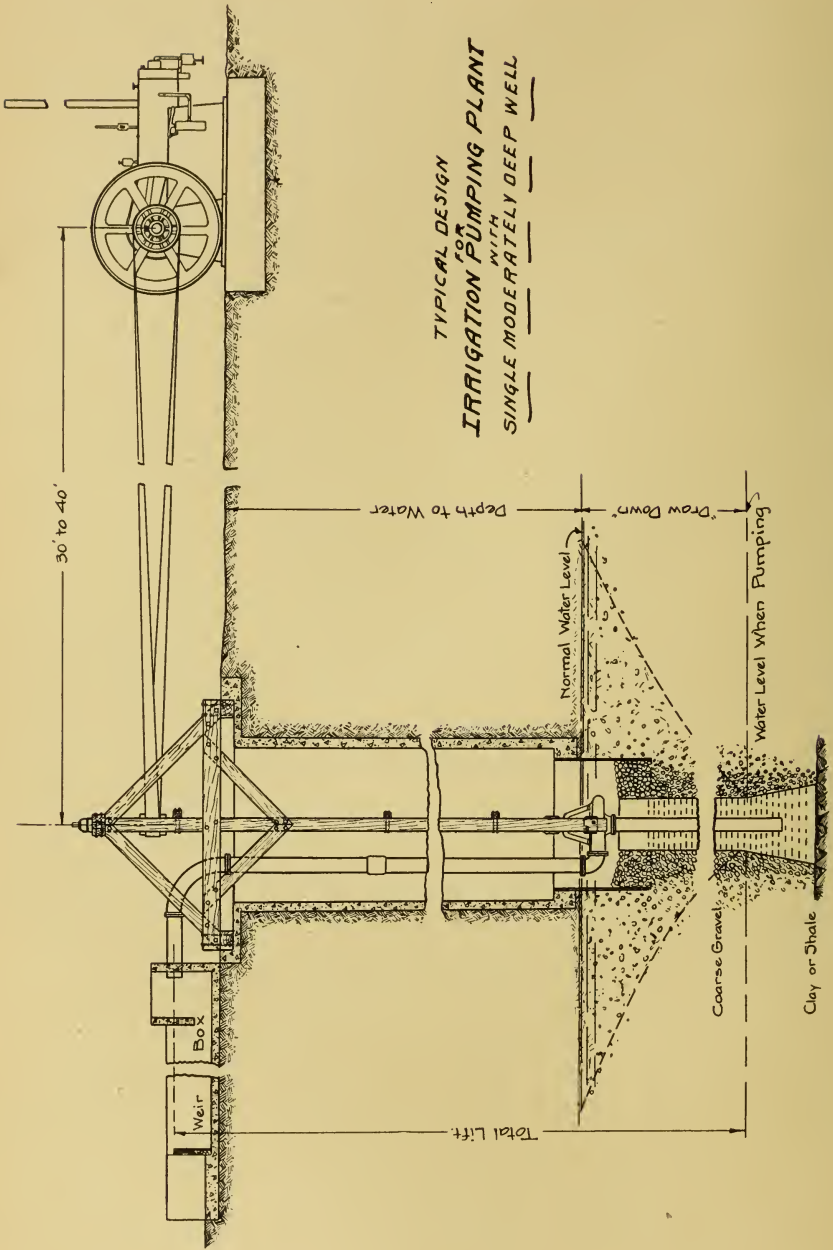


FIG. 48. A plan for a single irrigation well.

Irrigation in western Kansas depends upon the ability of the irrigator to bring the water to the surface. There is already a decided increase in the ability of the irrigator to handle his pumping plant.

In the following discussion of pumping plants only those plants that can be used where the source of water is comparatively close to the surface will be considered. Little difficulty is experienced in lifting water fifty feet, and there are thousands of acres of unirrigated Kansas land where the depth to water is one-half that distance. The river valleys in western Kansas nearly all have an underflow which can be easily reached and made use of. The geological map shows sheet water under practically all western Kansas, but at varying depths. Deep-well pumping in Kansas is practical only for a few acres, and will not be used extensively until the thousands of acres of the so-called shallow-water land are irrigated.

Supplemental irrigation for eastern Kansas received a large impetus in 1918 because of the dry season. In most cases in eastern Kansas the pumping plant is located on a creek bank, and the installation is more or less temporary. Pumping for irrigation from creeks is not as dependable as the underground water supply, because the creek frequently dries up when the water is most needed. There are many streams, however, in all parts of Kansas which furnish a continual supply of water and which can be used for farm pumping plants. In one Kansas county in the eastern part of the state during the year 1918, six farmers found that supplemental irrigation from creeks was a decidedly paying proposition.

Before a pumping plant of any size is constructed, the farmer should carefully consider the following: Source of water supply; the first cost of plant; the probable cost of maintenance; and the kind of crops to be grown, and market for same.

With the installation of a pumping plant it is necessary to secure a permanent water supply. If the location is not along a dependable creek or river it is necessary to secure a high-yielding well. It is not possible to select at random the location for a well. It is absolutely necessary to put down a test well first, and in this way determine the character of the water-bearing sand and gravel. It is practically impossible to secure a very large quantity of water from quicksand, even though

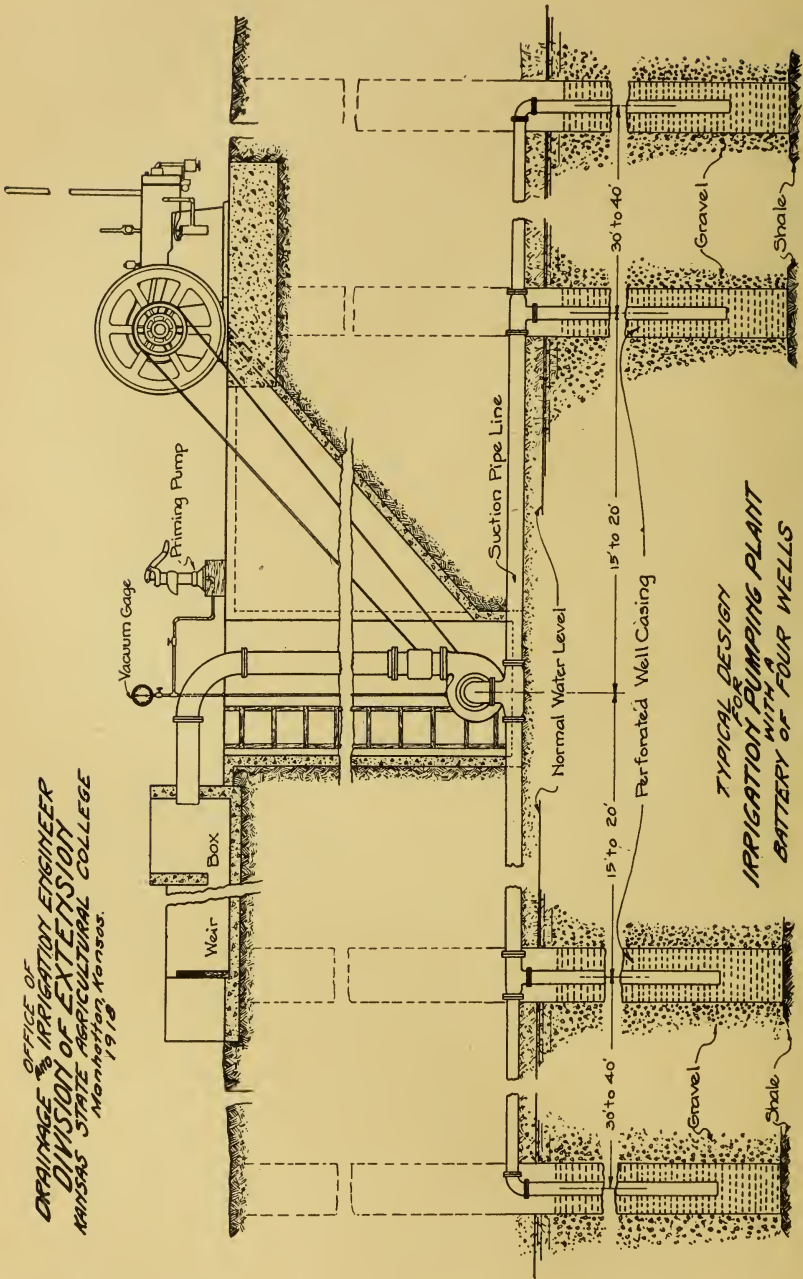


FIG. 49. A plan for a battery of irrigation wells.

the thickness of the water-bearing stratum (sand) is quite great. In general, the coarser the material through which the water seeps the greater will be the supply of water. It is evident, then, that in order to get a high-yielding well there must be not only thick water-bearing material (sand and gravel), but also fairly coarse gravel. In some instances the first water-bearing stratum may not be thick enough or coarse enough to give a high-yielding well, but in such cases it is best to investigate below the first stratum, and it is not improbable that a second or even third stratum will be found which will be capable of yielding an increased quantity.

If a test well fails to show the conditions indicated, it is well to investigate at different places in the field. Frequently a change of only a few hundred feet will make the difference between a high-yielding and a low-yielding well. The logical location for a well is on the highest land to be irrigated.

Several different kinds of wells are used for irrigation work. The general practice, however, in the shallow water districts is to put in a battery of wells and connect all of these to a common suction pipe attached to the pump. These wells are usually placed at right angles to the underflow and about 30 to 40 feet between centers. In some cases as many as twelve wells are attached to one pump, while in other cases, where the gravel and sand are coarser, it is only necessary to put in three or four wells. The battery of wells is practical for the Arkansas river valley, as the distance to water usually does not exceed 25 to 30 feet.

In the lower Arkansas river valley the water-bearing sand seems to be a little coarser, and it is quite possible to sink a single well and secure a quantity of water ranging from 300 gallons to 1,000 gallons per minute. In such cases a well pit usually six feet in diameter is excavated down to the water-bearing stratum. In the bottom of the well pit a steel casing, properly perforated and ranging from 24 to 36 inches in diameter, is sunk through the sand and gravel. Where a battery of wells is constructed the casing is usually 15 inches in diameter, and is properly perforated to permit the water to enter and to exclude the gravel and coarser sand.

In any case the well is a very important part of an irrigation plant. It should not be located until proper tests are made, and great care should be used in its construction.

It is the general custom to use ordinary galvanized iron,

usually 16 gauge, for the casings and strainers. These strainers will last for a long period of years if they are not too large in diameter, and unless the water is more or less salty. It is not unusual, however, for the casings to fail, due to the use of too light a material for wells 24 or 36 inches in diameter. Cement casings are used to some extent. All cement casings should be properly reinforced to withstand the pressure of the sand and gravel from the outside. The function of the strainer is to exclude the sand and gravel and allow the water to enter the well. The strainer should have 20 to 30 percent perforations and should not be placed in very fine water-bearing material. A well may be developed by pumping the fine sand out and packing the outside strainer with broken stone or coarse gravel.

The second important problem of the irrigation plant is to secure proper machinery to raise the water from the well to the surface of the ground. Actual experience in the pumping field demonstrates that the centrifugal pump is best adapted for pumping large quantities of water. These pumps have few moving parts, are simple in construction, are capable of handling a large quantity of water, and also can successfully pump a considerable quantity of sand without injury to the pump.

The farmer should select a simple type of centrifugal pump. For pumping heads of 50 feet or less, the ordinary single-stage centrifugal pump is best adapted. This pump may be either the horizontal or vertical type. Where the distance to water is 20 feet or less, it is the practice to use a horizontal single-stage side-suction centrifugal pump. This pump is placed in the well pit as near the water line as possible, and a belt run is excavated so that the line of belt will be on an angle of about 45 degrees with the horizontal. The engine is placed on the surface of the ground. Such pumps are simple in construction, are very easy to keep in alignment, and when properly cared for will last a number of years.

Where the distance to water exceeds 20 feet it is the practice to install a vertical centrifugal pump. This pump is similar in construction to the horizontal one, except that the impeller is operated by a vertical shaft. This makes it possible to place the bowl of the pump beneath the water surface; the vertical shaft is run to the ground surface, and the pump is operated by a quarter-turned belt attached to the driving power. Such pumps should be carefully installed in order that the shaft will

be perfectly aligned. It is preferable to hang the pump from the surface of the ground, rather than to attach it to the well casing. A single-stage pump gives excellent satisfaction.

In order to secure the highest efficiency from centrifugal pumps there must be a definite relation between the speed of the pumps and the lift of the water. Any change in this speed directly affects the efficiency of the pump. It is important, then, that the pump owner should know the proper speed at

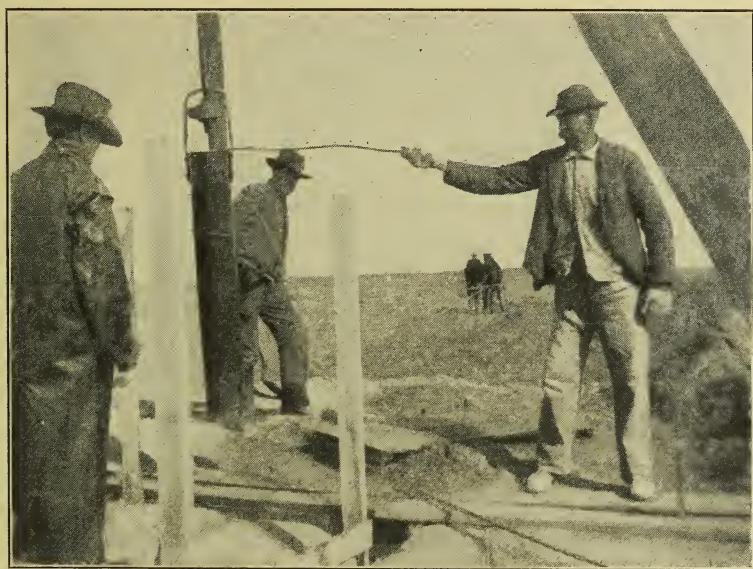


FIG. 50. Putting down an irrigation well in Edwards county, Kansas.

which to operate the pump in order to secure the greatest efficiency for the conditions of the lift. Reliable manufacturers furnish data with their pumps which enable the purchaser to determine the speed at which the pump should be operated to insure the best results for different lifts. If purchasers will require such information with their equipment and will install machinery which is suited to their actual working conditions, there will be less complaint concerning the lack of efficiency of the modern centrifugal pump and more profit will be realized from the pumped water.

A good pump is essential, but it is also necessary to have reliable and cheap power to operate the pumping plant. In Kansas where oil has been fairly cheap, it has been the general

practice to use internal-combustion engines for pumping purposes. These engines operate on different grades of fuel, and therefore it is important that the farmer select an engine that will give him the most reliable power for the installation. The type of fuel which the farmer should use will depend somewhat on the size of the installation. For small installations of from 3 to 10 horsepower, kerosene probably is the most reliable fuel. For installations of 3 horsepower or less, it probably would be more economical to use gasoline.

Experience has demonstrated that it is possible to secure practically the same amount of power from kerosene as can be secured from gasoline. With the cost of gasoline about twenty cents per gallon, and that of kerosene a little less than one-half this amount, it is evident that for medium-sized units kerosene is the proper fuel to use. The kerosene-burning engine does not require a very large amount of attendance after the engine has been properly started. However, the kerosene engine requires more attendance than does the gasoline engine.

For engines of 15 horsepower or greater, quite generally it is found economical to use a distillate oil for fuel. Distillate may be secured at prices varying from five to ten cents per gallon. The amount of power developed by one gallon of distillate is practically the same as that developed from one gallon of gasoline and it is possible to make quite a saving in fuel cost by installing engines which are equipped to use this character of oil. Engines burning distillate, however, require more or less attendance, and for this reason are not so well adapted to engines of small horsepower.

With the increased number of tractors on Kansas farms, there has been an increased use of same for power for pumping. This is particularly true of eastern Kansas where irrigation is more or less supplemental. In Washington county, Kansas, in the summer of 1918, six farmers made full crops where irrigation was practiced and in each case a tractor was used for power. One farmer has, however, since purchased a gasoline engine as he had use for his tractor at the same time that he desired to irrigate.

The electric motor affords a convenient and reliable power where electric current is available. In localities where contiguous farms are irrigated by pumping, it is possible to construct central power stations at which electric power may be

generated and then transmitted to the various farms throughout the locality. Such installations are much more reliable in service than the small individual plants, since this arrangement places the delicate power plant machinery at the central station in the hands of skilled mechanics. The average farmer can successfully operate an electric motor since little else is required than the operation of the electric switch, and many farmers find it extremely difficult to keep an oil engine in a reliable working condition. The cost of electric power is usually greater than from individual plants, but if all costs of pump-



FIG. 51. A temporary pumping plant established on a creek bank, having a No. 5 centrifugal pump.

ing are considered, electricity at three cents per kilowatt compares favorably with the average oil engine installation. It is estimated that it costs from five to six cents per acre foot per foot of lift to pump with power at three cents per kilowatt. The life of a motor is estimated at thirty-five years.

Many electric motor plants are in operation in the Garden City district, and these are giving uniform satisfaction. For the shallow water plants, using horizontal centrifugal pumps, a belt drive is used. This is preferable since the motor can be placed out of the damp pump pit, which is necessary in a well designed shallow-water plant. In the deep-well areas, where turbine pumps are operated, direct connected motors are the most practical. Electricity on the farm is becoming quite common and adds not only to the efficiency of the farm but also to its attractiveness.

A farmer should purchase no machinery that is not of standard make. It is important that machinery be of first-class construction and in such general use that it will not be a difficult matter to secure repairs. It is not a good policy to be too saving of horsepower when selecting an engine. In other words, there should be a little reserve horsepower in the plant at all times. It is possible to increase the capacity of a centrifugal pump by operating it at a higher speed, but it is very difficult successfully to carry an overload on an internal combustion engine. For this reason the farmer should secure sufficient power to operate the pump when running at its maximum capacity.

The cost of the completed pumping plant will vary from \$60 to \$100 per horsepower. The larger the plant the less the cost per horsepower. Specific costs cannot be given, for the reason that local conditions will determine the character and type of the well and the kind of machinery to be installed.

A pumping plant having a capacity of 750 gallons per minute is large enough to irrigate an eighty-acre tract in the Arkansas river valley if the distance to water is 20 feet. In other words, a No. 5 single-stage, centrifugal pump would be necessary for this work. The "draw down" in the well probably would be about 20 feet, or the total lift for a plant of this size probably would be in the neighborhood of 40 feet. To operate the plant at its fullest capacity a 25-horsepower oil-burning engine would be required. The probable cost of the engine, installed, would be approximately \$1,000. The cost of the pump and piping, complete and in place, would be approximately \$250. This would make a total machinery cost of \$1,250, not including the housing of the engine and well. The well probably should have a depth of 60 feet, and if constructed by local labor the total cost per foot would be about \$4.50, which would make the total cost of the well \$270. The engine house and other accessories, including oil tank, belting, etc., perhaps would cost \$330. Adding \$150 for incidental and other expenses will make the total cost of the plant, complete and in place, approximately \$2,000. This would be a cost of \$25 per acre, or \$80 per horsepower required, for a plant of this size. This estimate will show a wide variation on account of uncertain factory prices at this time, a wide range of labor prices, and, in addition, the locality and kind of plant installed

will affect these prices. This estimate will serve only to give some idea of possible cost.

The cost of operation is a very important item in the selection and installation of a pumping plant. Fuel cost includes cost of the distillate, kerosene, or gasoline, and the lubricating oil. An engine will consume about one-eighth of a gallon per horsepower per hour. That is, a 25-horsepower engine will consume about three gallons of oil per hour. If this should be distillate fuel the cost would be about 20 cents per hour. Lubricating oil probably would cost three cents per hour, making a total fuel cost of about 23 cents per hour for a 25-horse-

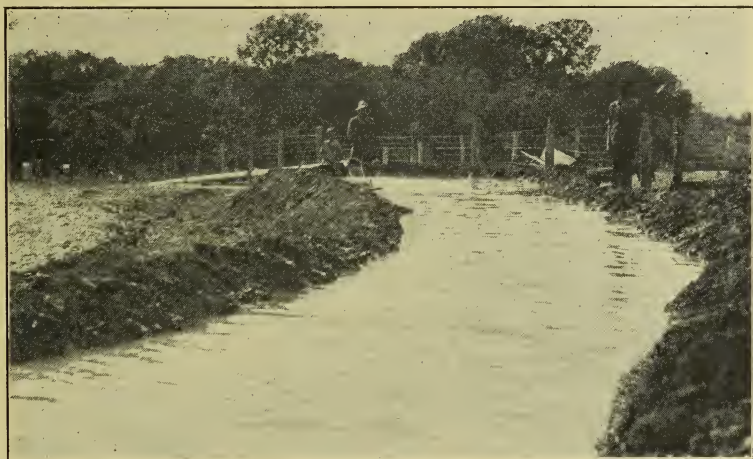


FIG. 52. The head of an irrigation ditch in Washington county, showing the end of the discharge pipe. The tractor used for power is seen in the background. The plant was established on the Little Blue river, and a No. 6 centrifugal pump lifted the water thirty-four feet.

power engine. Attendance to plant will vary with the size of the engine. The larger the engine the more attendance will be required. For a 25-horsepower engine the cost of attendance probably would amount to about 10 cents per hour.

It is not possible to give comparative costs of operating a pumping plant by engine or motor on account of the difference in installation, the ability of the operator, and the efficiency of the plant. Most plants show an efficiency of between 40 and 65 percent. It is generally estimated that with oil at ten cents per gallon and electricity at three cents per kilowatt, the cost of power of the oil plant will be about one-half the electric

power cost. The power, however, is only about one-half the actual irrigation cost.

One irrigator near Garden City, Kan., states that it costs him thirteen cents to pump 550 gallons a height of 30 feet, and that his electricity for that amount costs him seventeen cents per hour.

Depreciation cannot be very easily determined. It will depend upon the wear of the machinery, the action of the elements, and the individual who is operating the plant. In some cases it may be very high, and in other cases quite low. Some plants that have been in operation as long as fifteen years are



FIG. 52a. The first trial of a Scott county pumping plant.

still in splendid condition, while other plants that have been used only three or four years are practically ready for the junk heap. The depreciation of the plant that is improperly housed will be practically as great whether the machine is operated or stands idle. In general, depreciation can be figured at approximately ten percent per annum.

Interest on the investment will vary with the locality, but probably will be about eight percent per annum. It is readily seen that two very important items in the cost of water are the interest on the investment, and the depreciation in the plant. Each of these will be practically equal to the fuel cost, but this will depend more or less upon the number of days the plant is operated. Under average conditions, figuring on a basis of 90 days' pumping, the fuel cost will vary from three cents to five cents per acre foot of water per foot of lift. The depreciation will be equivalent to the same amount, and interest on the investment probably will be equal to the fuel cost, making the

total cost of water about nine cents to fifteen cents per acre foot per foot of lift.

Applying these figures to a 40-foot lift, the cost of enough water to cover an acre of land 12 inches deep would vary from \$3.60 to \$6. For a single irrigation four to six inches of water would be required. On a basis of four inches per irrigation, one acre foot would cover three acres of land, and the cost per irrigation would vary from \$1.20 to \$2. In many cases only fuel costs are considered. The cost of a four-inch irrigation with a 25-horsepower engine, operating a No. 5 pump with the



FIG. 53. Irrigating a field of corn in Washington county. This corn yielded an average of seventy bushels per acre in 1918, when corn in adjoining unirrigated fields failed.

40-foot lift, under first-class operating conditions, would be about \$1.50 per acre.

In the selection and installation of a pumping plant for irrigation the most important single item is a good well or reliable source of water supply. Next, select pumping equipment which will pump sufficient water, and see that each part coördinates with the whole. The capacity of the plant should be ample to furnish sufficient water in the dryest times as it is at that time the most profit is realized. The power should be ample to operate the pump. It will also be found profitable to install a plant with the idea of operating it every year and thus insuring a crop regardless of the rainfall. A reasonable

amount of care should be given all plants, particularly the bearings.

It is a common error to let the first cost overshadow the cost of maintenance and the efficiency of a pumping plant. A few dollars spent in properly locating the pump or using a larger elbow will save maintenance cost each year. An efficient plant will also save time and worry for the operator and may avoid a loss of crop due to a breakdown at a critical time.

COMMUNITY THRESHING OUTFITS.

By HALLEY K. DICKEY, editor *Implement and Tractor Trade Journal*.

HAVING a separator at the time when it is needed is one of the greatest problems with which the growers of grain have to deal. Grain in the shock must not be allowed to deteriorate through exposure to the whims of the weather. Extensive losses have been suffered through untimely rains while the wheat was awaiting the coming of the thresher. The wheat was damaged and a lower price was received through the effect of the rain.

A group of farmers in Franklin county, near Ottawa, had met up with this situation so often that they finally decided to take the matter of threshing into their own hands. There were ten of them, and the organization formed is known as the Highland Threshing Company, having a president and a secretary-treasurer. They got together and decided to purchase a small separator and a tractor to operate it. One of them in speaking of the enterprise said, "We did not look at the purchase of this outfit so much as an investment as we did as an insurance against the loss of our grain."

The outfit purchased was a 27-42-inch separator and an 18-36 tractor. The cost of the machinery was \$3,680 and the freight on same was \$119.40. The interest on borrowed money—the difference between the \$3,400 paid into the treasury and the cost of the outfit—was \$8.74. The total cost amounted to \$3,808.14.

The outfit was received on June 25 and threshing commenced on July 2. Exceptionally favorable weather conditions prevailed during the threshing season and there was lost only two days of the first 48 days out, a record that is hard to beat. The season was finished November 5.

At the close of the season the organization cast up the figures to see what the results had been. The total income from the outfit amounted to \$2,814, and the total expenditure, \$1,022.84; the profit as shown by the ledger was \$1,395.16. Remembering that the company had an original investment of only \$3,400, the Highland Threshing Company paid a dividend of a fraction more than 41 percent at the close of the 1918 season.

Each member of the company paid for his own threshing, and had it done on time. The outfit also worked for farmers not belonging to the company. The profits on this outside work were included in the 41 percent. The advance in the price of machinery during the period in which the outfit was



FIG. 54. The community threshing outfit holds great possibilities for the wheat farmers of Kansas.

used more than offset an estimated depreciation of 20 percent, hence no depreciation was figured in the transaction.

The company employed an engine man for 59 days, whose salary totaled \$295. There was also employed a separator man for 52 days, at a cost of \$260. The difference in the number of days worked by the two men is accounted for in the fact that only the engine man was required when the tractor was being used to operate silage cutters, which was a part of the work performed. These salaries were also included in the items of expenditure.

Incidental expense items, which included a canvas cover, also canvas to spread under the feeder; cup grease; bolts; three steel gas barrels; and other items necessary to a new outfit, totaled \$171.89.

In the operation of the tractor 1,175 gallons of kerosene were used at a total cost of \$213. There were also 350 gallons of gasoline, which cost \$82.95. The repair bill for both tractor

and separator came to a total of \$12.89. These items were also included in the total expenditure.

During the period of operation the outfit threshed 19,622 bushels of wheat; 18,445 bushels of oats; 129 bushels of barley; 32 bushels of rye; and 112 bushels of other grains. The tractor was used in operating silage cutters to the extent of 695 tons of silage.

This is an excellent example of community coöperation, and, in the words of Mr. Glenn Fitch, one of the farmers coöperating, "It is the first company to buy an outfit in this part of the country under such a plan. But there will be more in the future, for others have seen us make good with our thresher and separator." It is only a suggestion of possibilities along these lines. High-priced and complicated machinery which, because of the great initial expense, is impossible for the individual farmer, may be coöperatively purchased by a number of farmers and used when it is needed, and the work can be performed at actual cost. Profits on the machinery can be prorated among the members of the association just as is done in any other coöperative enterprise.

USE OF PAINT ON THE FARM.

By H. H. KING.

THE Kansas farmer is not using enough paint. Too often this lack of paint is to be attributed to a lack of understanding on the part of the property owner of the purpose for which paint is applied. Many times the farmer feels the main reason paint is applied is to beautify his dwellings, but he does not consider the increased beauty, which arises from painting, as equal to the cost incurred in purchasing and applying good paint. It is the writer's opinion that painting farm dwellings will increase the looks and give such an air of prosperity to the surroundings, enhancing the value of the property to such an extent as to more than make up for any expense occasioned in painting.

While the increased beauty of one's farm dwellings is a sufficient reason in itself for painting them, it nevertheless is not the main reason or purpose of applying paint. Paint not only beautifies, but it protects. Lumber when exposed in an uncovered condition soon begins to decay. It is exposed to all the caprices of the weather. When the air is charged with

moisture the uncovered lumber takes up water and becomes more or less saturated. When the concentration of water vapor in the air diminishes this water escapes again back into the air. If while the lumber is full of moisture a freeze should take place the water solidifies and in doing so expands about one-tenth of its original volume. Since this moisture is enclosed within the grain of the wood when this expansion occurs it is bound to cause serious trouble with the fibre of the wood. And, again, wood in an exposed condition is subject to dry rot fungi and mildew, both of which quickly destroy the value of the lumber.

All of these defects are greatly modified and almost obliterated if the surface of the lumber is covered with a layer of good paint. Moisture can no doubt pass through a paint film to a certain degree, but a painted surface is largely protected from sudden and pronounced changes in its water content. As to the effect of paint in preventing the growth of fungi of various varieties one need only to review the researches of Mr. H. H. Gardner, Assistant Director of the Institute of Industrial Research, Washington, D. C., to ascertain the power of paint to serve as a protection against such diseases. He finds paint films to serve actually as a mild disinfectant.

Paint serves as insurance against decay. One insures a dwelling against loss by fire and considers the money spent on such insurance to be wisely invested, and he is correct. If a building is left unpainted it is as surely destroyed by slow decay as though it were being burned. The main difference is to be found in the speeds of the two processes. The fire is rapid, the decay is slow. An application of paint prevents this decay. Then the investment in paint is as wise as the investment in an insurance policy. Further than this, a very low percentage of buildings on which insurance premiums are paid actually burn, but, on the other hand, every building left in an unpainted condition is being destroyed. If it is wise to insure against fire, how much more wise to insure against decay?

When one has arrived at the conclusion his buildings need repainting the question comes, what kind of paint shall be applied? Shall the cheapest paint found on the market be used, or shall a paint of greater cost be employed? If the cheap paint was of the same composition and made under the same condi-

tions as the more expensive paint, then by all means use that paint which costs the least. This seldom, if ever, is the case. The cheapest paint one can find on the market is usually cheap because of inferior quality. * (What is being stated here applies to the dwelling houses; barns and outhouses do not demand the same kind of paint as houses and will be considered later.)

To properly understand the differences in the quality of paint requires some knowledge concerning the composition of paints in general. A paint consists of some vehicle as linseed oil, in which is thoroughly incorporated some solid substances called pigments. Usually there is present also some product such as turpentine to serve as a thinner, and often some oxides of certain metals which serve to hasten the drying of the paint when it is exposed.

The vehicle serves the purpose of imparting fluidity to the mass, thus permitting the application of the paint to the surface. It also, by penetrating the pores of the lumber, serves to bind the paint to the surface of the lumber. It is this vehicle or oil which imparts the property known as gloss. The turpentine used for thinning increases the penetrating property of the paint and lowers the viscosity, making it easier to brush out.

The oil most generally employed in this country for outside painting is linseed oil. Any oil used must have the property of drying; that is, on exposure to air it must take up oxygen and produce a substance of semi-solid character. It is this property of drying which binds the pigment firmly on the lumber. Many oils besides linseed show this drying tendency, but none are better for ordinary purposes. Sunflower, Soya bean and Menhaden fish oils have been employed in some of the paint experiments at Manhattan. These were mixed with linseed oil in half-and-half proportions, and while they did not show any superior qualities to linseed oil alone, neither did they manifest any inferior qualities, indicating the possibility of their being used as partial substitutes for linseed oil. The experiments involving the use of sunflower oil are very interesting, inasmuch as Kansas is well adapted to the growth of this plant.

There are many different kinds of pigments upon the market which possess individual properties which make them valuable for certain purposes. The white pigments which have long proven their value are those made of lead and zinc. These should always constitute the basic pigments. In the experi-

ments at Manhattan, and those conducted elsewhere, it appears that mixtures containing both of these pigments possess better covering and lasting qualities than either alone. Lead pigments show a decided tendency to chalk when mixed with oil, and in the case of tinted paints tend somewhat to obscure the color effects. On the other hand a zinc oxide pigment dries to a very hard film, producing a surface which tends to crack. A chalking surface is better adapted to repainting than a very hard compact surface, but a film containing both kinds of pigments possesses on the average better qualities than either alone.

For some years ready mixed paints have had incorporated along with the lead and zinc oxide, pigments, varying proportions of so-called reënforcing or inert pigments. Experience and paint tests have shown that such substances may be employed with no noticeably serious effects. In fact it is claimed the presence of certain ones of these inert pigments may really increase the value of the application properties of the paint and its wearing quality. Some of these tend to prevent the paint from setting to a hard, compact mass in the container; some to neutralize any acidity of the oil, and some increase the brushing-out properties. It appears the presence of these inert pigments in moderate amounts is not to be altogether considered as adulterations.

By addition of proper tinting materials one can produce almost any desired color in paint. The coloring pigments scarcely ever make up more than from one to five percent of the total pigment. The coloring matter is usually added at the time of the mixing of pigment and vehicle. The main portion of the pigment consists of white lead and zinc oxide. Not only can one produce the color desired by adding the proper tinting substances but by so tinting actually increase the life of the paint film to a rather remarkable degree. This can easily be observed by inspection of the photographs of panels, Figs. 55 and 56. These white paints are composed of the same pigment, the difference being that Fig. 55 has been exposed to the weather for almost four years facing the south while Fig. 56 has been hanging on the same test fence but facing the north. This shows very clearly that for Kansas a southern exposure destroys paints much more rapidly than a northern exposure. In Figs. 57 and 58 we have the same paint in every

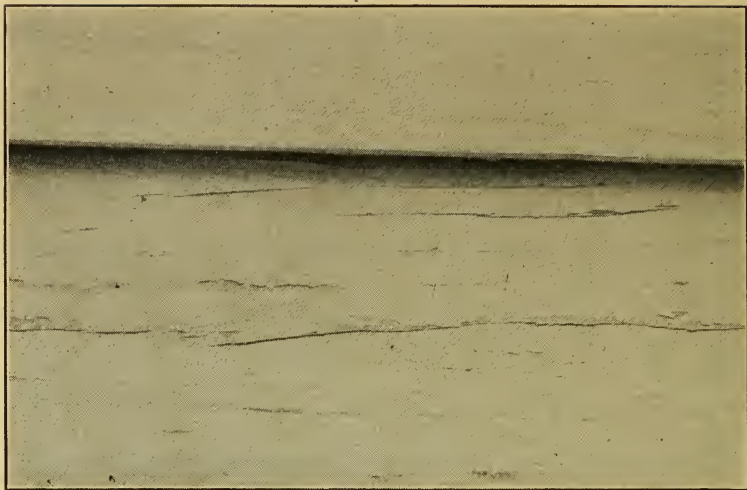


FIG. 55. This painted panel has been exposed to the weather for almost four years, facing the south.

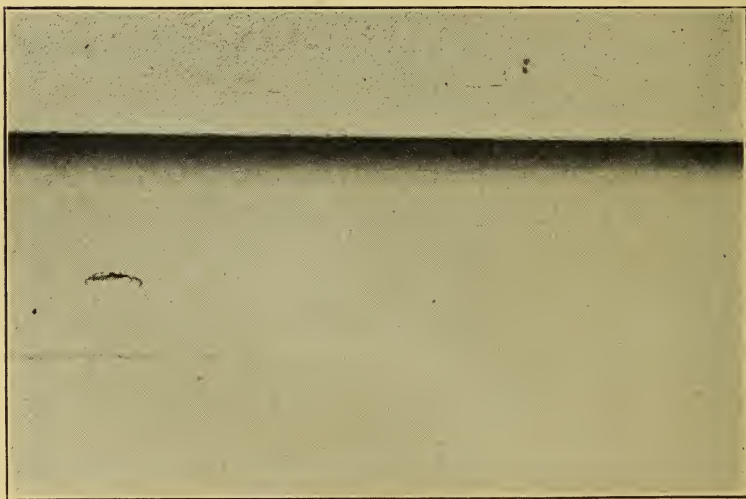


FIG. 56. The panel shown in this illustration was painted with the same material as was used in painting the panel shown in Fig. 55. It has been hanging on the same test fence, but differs in the fact that it was facing the north. A comparison of the two shows very clearly that for Kansas a southern exposure destroys paint much more rapidly than a northern exposure.

particular but tinted yellow with a very small quantity of chrome yellow. These yellow paints faced south and north respectively and serve to show the effect of this color in lengthening the life of this paint. In most cases the panels painted with the tinted paints stood up better than those painted with a white paint. This appears to agree with results obtained in other climates in similar researches.

Particular attention should be given to the nature of the surface to be painted. Failure to do so often results disastrously and because of no fault of the paint. A paint cannot adhere to a surface on which it cannot bind itself. Lumber of a very resinous character like yellow pine is very difficult to paint satisfactorily. If the paint is placed on the lumber while it is full of sap and resin, when this sap is fried out of the board by the hot weather of the summer months it carries the film off with it. The effect of lumber upon a paint which has proven its value in other tests can be seen by observing Figs. 59 and 60. Here we have portions of two boards taken from the same panel. One board has a fairly good film of paint upon it while the other is in a very serious condition. The only conclusion to be drawn in this is that the lumber in one case was in good condition for painting and in the other it was not. It would be very difficult to make any paint stick to such a surface. It is very likely that paint would remain on this bad surface if it were now repainted since the resin and sap which caused the trouble in the first place are gone. In case of new houses, it is well to let them stand for a few months before painting, which gives them time to dry out some and be in better shape for painting.

In repainting care should be exercised to see that the new coating of paint is not placed over surfaces of old paint which are not properly attached to the boards. A paint film is no better than its foundation. Before applying the paint in repainting jobs, completely remove all loosely hanging particles of paint by means of a wire brush, or burn all the surface off by use of a blow torch. Wood which is of very close fibre requires more turpentine to bring about the proper penetration of the surface than wood of a porous character. A hard film of old paint also requires more turpentine than a loose chalky surface. These things should receive consideration in order to obtain results which will prove satisfactory.

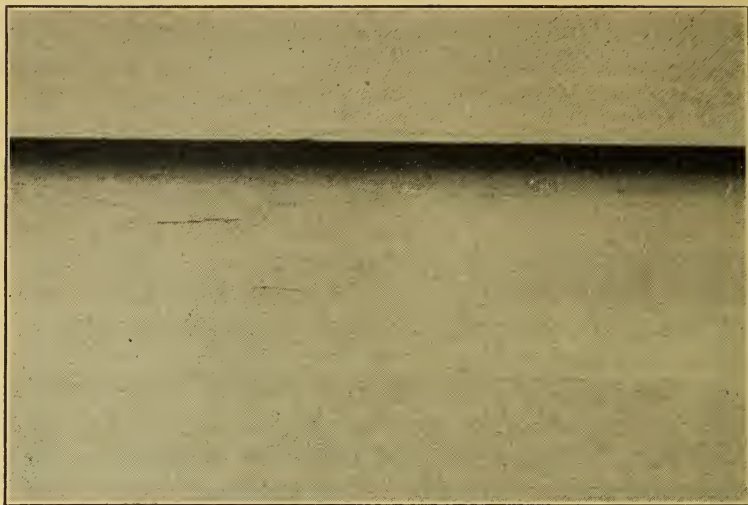


FIG. 57. The paint used on this panel was the same as that used on the panels illustrated in Figures 55 and 56, except that it was tinted with a very small quantity of chrome yellow. The panel in this figure faced the south.

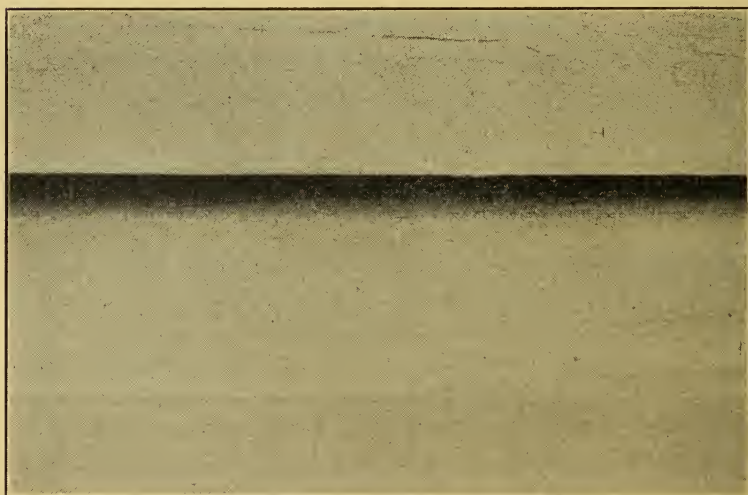


FIG. 58. The panel in this picture was painted exactly as that shown in Figure 57, but faced the north. These two panels serve to show the effect of tints in lengthening the life of paint.

On the farm where only small jobs of painting are required from year to year, ready mixed paints prove very satisfactory. One can make calculations of the quantity of paint required for the job and buy paint sufficient for the work without having any waste. Such is not so easy in case of hand-mixed paints, although hand mixed paints may be easily made up. One advantage the ready-mixed paint has over a hand-mixed product is the completeness with which the pigment is incorporated within the oil. In a hand-mixed paint where dry pigments are to be mixed with oil much care should be exercised in order to insure complete mixing of the ingredients. It requires much time, patience and labor to do this in the manner in which it really should be done. There is a natural tendency on the part of the one doing this work to stop before complete mixing has occurred. To do this means lessening the value of the paint.

A very satisfactory and lasting paint may be made by hand on the farm by thoroughly mixing equal parts by weight of a good white lead with zinc oxide, both being in the paste form, with raw linseed oil. A pint of turpentine and a pint of some pale Japan drier should be used to every gallon of pigment in oil. The percent by weight of zinc oxide can be less than this, but should not be less than 25 percent of the total pigment.

Careful attention should be given to the condition of the weather in painting. It is usually more convenient to paint during the times when labor is least demanded for the farm work. This often means the painting will be done during very undesirable times as regards painting. No paint should be applied to a surface immediately after rain storms or when the surface is charged with frost. Nor should painting be done during cold weather, because this often causes paint to pucker. It is the writer's opinion that a large percent of the reported failures of paints is due to a lack of understanding or care on the part of the property owner and painter. Paint should be given a fair chance to show its worth and should not be condemned when something else is at fault.

Barns, roofs, and machinery may be painted with much cheaper paint than farm dwellings. These paints are made to meet the demand for low prices and are usually colored. Such paints can be very easily adulterated, and when these paints are offered at very low prices one may well suspect their qualities.

As a usual thing barns are painted red or brown and trimmed

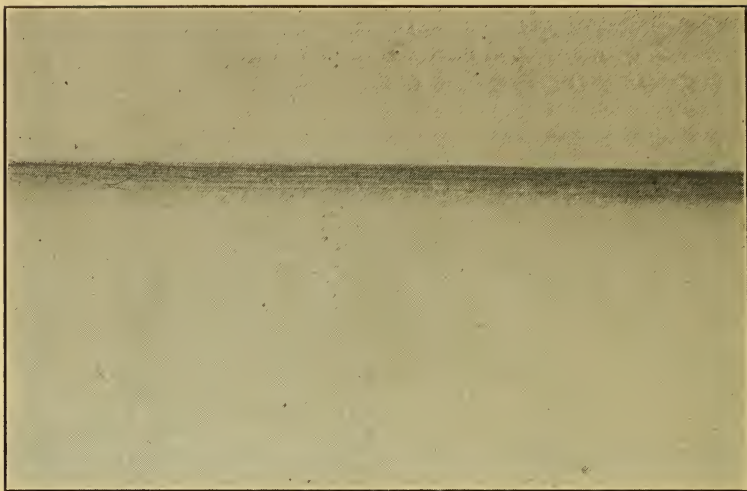


FIG. 59. A panel which was in good condition when painted.

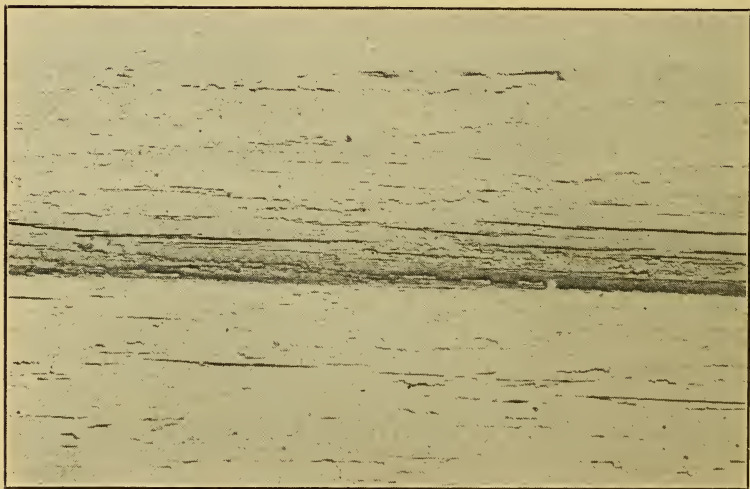


FIG. 60. A panel which was not in good condition when painted, though the same material was used as in painting the panel shown in Fig. 59. If the paint is placed on lumber full of sap and resin, the sap is fried out of the board by the hot weather of summer months, and the film of paint is carried with it.

in white. The basis of these colors is iron oxide, such as Venetian red or metallic brown. A fairly good barn paint may be made up with iron oxide composing practically the whole of the pigment, using raw linseed oil with about one-half pound of liquid drier to the gallon of paint.

Painting metallic surfaces requires some knowledge concerning the surface in order to cause the paint to stick. Tinned surfaces, as on roofs and gutters should be well washed off with soap and water to carry off the layer of grease or oil which remains from the process of tinning. The soap suds should be in turn removed by water and the surface allowed to dry before applying paint.

Freshly galvanized iron surfaces often cause considerable trouble in painting. The smooth, hard surface of zinc holds paint with difficulty. Before painting such surfaces they should be well washed with a solution of copper acetate. This solution leaves precipitated copper on the surface which serves as sort of an anchor for the paint.

The price of a good paint is now very high, and one can estimate the cost in applying the paint will be double the price of the paint. On this basis the paint costs approximately one-third the total. For this reason it would appear that the wise thing to do is to buy a good paint and put it on under favorable conditions. Such procedure will in the end prove most economical.

PLANNING THE FARMSTEAD.

By K. J. T. EKBLAW, professor of farm engineering, Kansas State Agricultural College.

A REAL problem for the up-to-date farmer is that of farmstead planning. Without a doubt, if a careful study were made of Kansas farms, a good big improvement would seem to be possible on ninety percent of them, in the way of better arrangement, and probably on every farm some improvement could be made. The loss of time, the excess of labor involved, the reduction of efficiency—all these things become surprisingly evident when a careful analysis is made of a farmstead and its arrangement. In these days of economic stress, when everyone should be putting forth his best efforts and straining every fiber to increase production, no opportunity to increase efficiency should be lost sight of. The average man seldom thinks that he could save time and effort by using care and

forethought in the location of his buildings with proper reference to their relation to each other and to the farm operations, and as a consequence the farm that possesses an efficient building arrangement is very much the exception rather than the rule.

When a manufacturing plant is being built, the arrangement of the buildings is not left to the judgment of the architect alone; nor is any haphazard setting of the buildings just to get them within a certain space at all permissible. In a project of this kind, a careful study is first made of the operations to be carried on, the sequence of operation is tabulated, accurate estimates of time requirements are made, probably expansions are taken into account, and all incidental but important factors, such as fire risk, water supply, transportation facilities, etc., are given careful consideration. When all these various items have finally been decided upon, by production and efficiency engineers, then the architect may be called in and permitted to proceed with the preparation of the construction plans.

The farm is simply a factory; the farmstead is not only the executive center and as such intimately connected with all farm operations, but it is the location of many of them as well, such as the feeding and housing of livestock, the repair and storage of equipment, and the storage crops supplies. So much of the work is done right here that it makes a splendid place to effect economy if the right steps are taken to accomplish it.

The construction of an entirely new farmstead, of course, gives every opportunity for its establishment on an efficient basis, and there is no excuse for poor arrangement. On farmsteads that have been previously established, the problem is an entirely different one, and is usually much more difficult of solution, because not only must the revised arrangement be efficient, but continual care must be exercised to make the most economical use of those buildings already installed. Sometimes an old farmstead is so badly and inefficiently arranged that complete reconstruction is advisable.

In earlier days agricultural pioneers in deciding upon the location for the farmstead had to consider entirely different influences from those that now prevail. Many of the early settlers came from the East and naturally gravitated to such locations as most nearly resembled their former abodes. Some supply of water had to be convenient consequently a spring

sometimes was the controlling factor in the farmstead location, and advantage was taken of every natural resource.

In modern times these factors have been to a certain extent reduced in importance and new and entirely different ones have to be given attention. Factors which formerly were logically predominant are now of relatively minor importance. The predominating thing that the modern farmer has to consider is the type of farming to be practiced, whether the principal efforts are to be centered on the raising of grain, stock, fruit, truck, etc. The size of the farm is important, and in close connection with this possible expansion of the farm in direction and amount must be carefully considered. It must be remembered, too, that every farmstead is an individual problem, possessing its own peculiarities, so that a particular study must be made of every place and the relative importance of the various factors determined after all of them have been given careful and thoughtful attention.

The American system of farmstead arrangement is entirely different from that practiced in European agricultural communities. In America where land is relatively cheap and where the inhabitants have had the opportunity to develop broad-mindedness in viewpoint and attitude, the buildings constituting the farmstead are usually found spread over a relatively large tract of land. They are distributed rather than concentrated as in the case of the European system where the inhabitants, the farm stock, the farm equipment, and all stored supplies, are kept under practically the same roof. The European system has the advantage of unity and economy in structure, convenience in operation, and utilization of the minimum amount of probably very valuable land. On the other hand, sanitation is bound to be rather poor, fire risk is great, and the close association of humans and animals may not operate to the best advantage. The American system is advantageous in that a better arrangement of lots is possible, different kinds of animals are separated, the construction of the buildings can be adjusted to suit requirements, and there is less danger from fire.

The various influences which affect the location and arrangement of the farmstead are numerous and the relative importance will depend to a great extent upon the particular section of the country under consideration.

Climate is one of the most important factors. In very cold, windy regions, some sort of a windbreak is almost necessary, and where a considerable number of animals are kept their protection is a matter of great moment. The windbreak, if one be planted, should protect the farmstead from cold, chilling winds, but should not entirely surround the place so as to prevent summer breezes from blowing. A breeze in summer time is one of the best cooling agents available. Careful consideration must be given to the prevailing direction of the wind in different seasons, not only for the reason that has just been given but because in locating the residence care must be taken so that offensive odors from the other farm buildings will not be carried to it.

The character of the land must also be taken into account. Heavy, mucky soil is not suitable for the location of a farmstead because it does not drain well and the soil is likely to become waterlogged and will dry out very slowly. A sandy or gravelly soil has the advantage of rapid drainage and quick drying. When a garden is considered we must select good soil for that, consequently we must be careful not to locate on the poorest part of the farm. In cold climates a southern slope is usually the most comfortable, since it gets the rays of the sun more directly and thus will be dry a greater portion of the time. Eastern and western slopes are in some sections of the country to be recommended.

Provision must be made for the proper arrangements of lots and pastures. Lots should be large enough to accommodate the stock to be cared for and should be in close proximity to the barns or storage buildings. A great deal of thought should be given to their arrangement, for upon this will depend to a great extent whether an efficient feeding system can be developed. Pastures, if not adjacent to the farmstead, should be readily accessible through lanes or systems of gates. This brings up the question of fences. Good fences are an asset, while poor fences look bad and usually consume a great deal of time in making repairs. Choose their location very carefully and build well.

The market, the church, and the school, entering as they do so closely into the life of the farm, must be given special consideration and the farmstead should be located so that all three of these are readily accessible.

One of the most important things in the location of the farmstead is to take the fullest advantage of whatever views the landscape affords. The development of the artistic side of the farm has been all too sadly neglected and every effort should be made to develop real appreciation of the beautiful in nature. When a beautiful view exists, do not hide it; keep the buildings out of the line of view. Do everything possible to make the view even more beautiful. Farmstead planting has received considerable attention in recent years and a number of institutions have published bulletins giving valuable suggestions along this line. For a remarkably low expenditure enough plants can be purchased to transform the barest and bleakest yard into a beautiful little park. Tree planting should also be more generally practiced; our western plains have all too few trees. By choosing trees which are suited to the climate and rainfall we can add much to the beauty of the prairie.

Perhaps one of the greatest aids in the planning of the farmstead for efficiency and economy is a carefully-drawn map of the farm. It can be drawn to scale—say an inch to five rods. In planning the location of buildings small blocks of different colored paper or cardboard, cut to scale, can be used to represent the buildings and these may be moved around into various positions so as to enable one to decide as to the relative distances and comparative advantages of different locations. With a careful and accurate analysis of the prospective farm operations at hand, the arrangement that gives the best results can then be made without difficulty. A map such as described is invaluable in directing farm operations, for the whole farm can be seen, so to speak, at a glance. It may also be made to serve as a record of the location of underground tile drains, a record of which should be carefully kept.

The acre yield in America under extensive systems of agriculture is low, but the man yield is high. In European and Asiatic countries, under systems of intensive farming, the acre yield is high and the man yield is low. For example, the acre yield of wheat in America is little more than 14 bushels, while in Germany it is 31 bushels, in France almost 30 bushels, and in Japan 24 bushels. But the yearly income for each farm family in America is approximately \$1,000, as compared with \$580 in Germany, \$570 in France, and \$235 in Japan.—*The Essentials of Agriculture, Waters.*



FIG. 61. Twenty-four horses hitched to a combined harvester-thresher in the state of Washington. The leaders alone are driven with lines; the others are "tied in and bucked back."

MULTIPLE HORSE HITCHES.

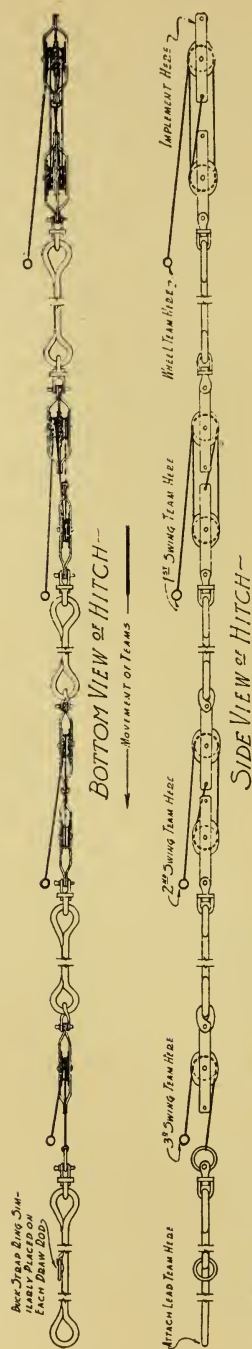
By WAYNE DINSMORE, secretary Percheron Society of America.

ON the large farms in Kansas increasing the efficiency of horses and mules reduces labor cost and makes it possible to do more work in less time and at less expense.

The farm implements most used in Kansas are disk-harrows, seeders, corn planters, corn cultivators, mowers, rakes, harvesters, and plows. Horse- or mule-power is the most economical power available for these various farm implements, because it is flexible and can be used in such units as the particular implement requires. But two horses are needed on corn planters, three on two-row corn cultivators, two on mowers or rakes, four on harvesters, four to six on disc harrows, while in the case of plows, where four are ordinarily used, six, eight, or ten, can be used just as easily, when the proper method of hitching and driving the horses or mules is understood.

The farmers of the great Mississippi valley, who have been wont to boast of the large amount of work done per man employed in the field, on account of labor-saving machinery and large horse units, do not realize that on the Pacific Coast, especially in the Palouse country in Idaho, Oregon, and Washington, three bottom plows drawn by eight or ten horses or mules, and driven by one man, are customary. Experience has shown these farmers that they can plow from eight to eight and one-half acres per day, or an average of fifty acres per week, without driving their teams any faster than is the case in the corn-belt, where only one-half as much plowing is done per day.

The four-abreast hitch has been a common one on plows, disc-harrows and harvesters, largely because men have not known of other hitches which could be used as easily, and more satisfactorily from the horse's standpoint. The four-abreast hitch on a single-bottom plow or a two-bottom gang is exceedingly undesirable. In the first place it causes side draft and the plow actually pulls from twenty to thirty percent harder than it pulls when the teams are strung out in two pairs and the teams are pulled each on the true line of draft. In other words, the man who drives four horses abreast on such a plow is loading them with twenty-five percent greater pull than they should have, which added pull is entirely unnecessary, actually



Patents applied for in U. S. and Canada.—E. A. White.

FIG. 63. Diagram of a ten-horse multiple hitch readily adapted to eight, six, or four horses by dropping off the rear units.

detrimental to the plow, and injurious to the horses, not only because they have this added pull, which is an economic waste because unnecessary, but also because the two inside horses are blanketed by the outside ones, become overheated, and are liable to be trampled on in the turns.

Recognition of the much greater amount of work done on the Pacific Coast, where the horses are strung out in tandem pairs, led the writer to institute some work in conjunction with Prof. E. A. White of the Illinois Experiment Station, which has resulted in the invention of what are known as the multiple horse hitches, whereby the teams are strung out in pairs tandem. An absolutely true line of draft is made possible on a single-bottom, two-bottom, or three-bottom plow, and the



FIG. 62. Illustrating the use of weights between teams, in order to get the proper angle of trace.

horses' comfort in work materially increased. The importance of a rapid development of these hitches made it desirable to have them manufactured by some company which would put out a high-class product and introduce these hitches as rapidly as their importance justifies. Before any company could be induced to engage in the manufacture and distribution of these hitches it was found necessary to patent them, and, as no conflicting patents were found to exist, patents have been applied for by Prof. E. A. White, and assigned to the Multiple Hitch Company, Union Stock Yards, Chicago, Illinois, which is undertaking the production and distribution of these hitches on a wide scale. They will be made from the best quality of material and are the first scientifically-designed, properly-balanced hitches ever put on the market. Their general introduction and use will greatly increase the efficiency of horses and mules used on Kansas farms; will reduce labor cost in plowing by one-half; and will eliminate from most farms the necessity

of purchasing high-priced tractors, which are a constant source of expense on account of breakdowns and repairs. Arrangements will be made to hold field demonstrations of the eight-

horse hitch on three-bottom plows, at some points in Kansas during the 1919 season. All farmers who are keen to appreciate labor-saving devices should by all means attend these demonstrations.

A very good report and description of the hitches designed has been prepared by Professor White. It follows:

In our remarkable agricultural development of the past three decades the horse has played such an important part that this noble animal has justly earned the right to be considered the standard prime-mover for farm work. In fact until very recently the horse was the only motor suited to generating power for the operation of tractive machines and implements. In the field or on the road, wherever loads are to be moved, there the horse is found. From the utilitarian standpoint the horse is a motor converting the energy stored in his feed into mechanical energy, which is used to plow the fields, sow the grain, cultivate and harvest the crops. By using the horse in this manner, man has been relieved from

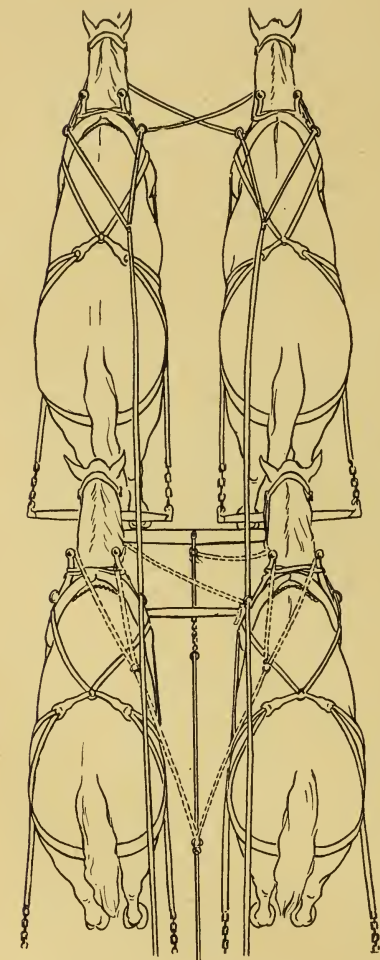


FIG. 64. Diagram of "tying in and bucking back" on a four-horse team. The leaders alone are driven, whether four, six, eight, or ten horses are used. All pairs except leaders are controlled in this way.

much of the drudgery which was formerly necessary to produce food. Horse-labor has been substituted for man-labor. In former times (not so long ago either) the

amount of food which one man could produce was limited by the amount of land which he could cultivate with his own hands; to-day it is limited by the amount of power which one man can control. Almost within the memory of men now living, we have passed from the 2-horse team to the use of 4, 6, 8, 10 or 12 horses, while in the far West 33 horses are worked on the combined harvester and thresher. In this development the problem has always been: How can the horse be used more efficiently as a motor? The efficient use of the horse involves a large number of important problems. This discussion will be limited to a consideration of the problem of securing efficient hitches, whereby the pull may be equally distributed between the various draft animals, the

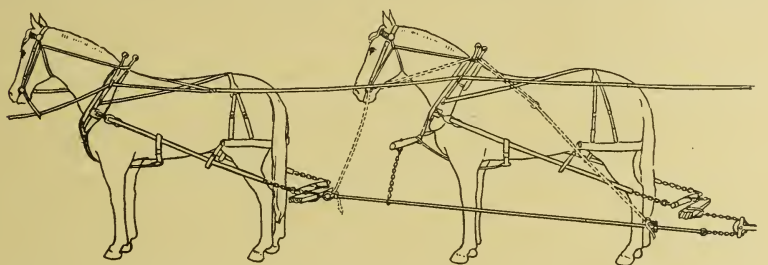


FIG. 65. Side view showing only the off horses in a four-horse team, to illustrate the method of "tying in and bucking back."

horses enabled to work under favorable conditions, and the hitch so adjusted that the load will be pulled with the smallest expenditure of effort consistent with good work.

The hitch question has always been a perplexing one, and the difficulties have multiplied as the number of horses which are used has increased. At the present time we are chiefly concerned with the more efficient use of the horse on soil-preparation machines (the plow and disc harrow), and in hauling work. The proper preparation of a desirable seed-bed is slow, hard work, requiring the expenditure of a large amount of power. Not only is it desirable to plow and harrow as rapidly as possible, but an abundance of power is also necessary if the vitality of the work animals is not lowered, and the quality of work such as is demanded to-day. The hauling problem is becoming more important as the bulk of material to be moved increases. Larger crops mean more grain to haul to market and more fertilizers to bring onto the farm. From every important

standpoint better farming means an abundance of horse power efficiently used.

In designing any hitch due consideration must be given to the following points:

- Number of horses required for good work.
- Equalizing the pull between the horses.
- Method of driving the horses.
- Securing favorable conditions for the horses to work under.
- Elimination of "side-draft."

Each one of these problems can best be considered in reference to the various implements and will be taken up at the proper time.

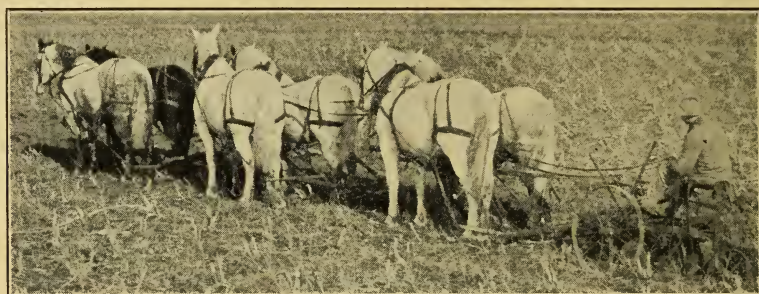


FIG. 66. A multiple hitch for a six-horse team on a two-bottom, 28-inch gang plow. It turns six acres per day where fields are long and horses are large.

The moldboard plow is not only the most important of all the soil-preparation implements, but also the most perplexing to operate properly. Undoubtedly over one-half of our present plow troubles are due to improper hitches. The plow is a very unique implement. It works a narrow strip of soil and makes, relatively speaking, a very heavy load. The draft of a 14-inch single-bottom plow varies with the type of soil, depth, and conditions of plowing, from 150 to 1,000 pounds. Under what might be considered average conditions, plowing at a depth of six inches, the draft varies from 300 to 400 pounds, and when this same soil becomes dry the draft may increase to 700 pounds, or even more. It is generally assumed that a horse working at the rate of 2.5 miles per hour (normal plowing speed), can exert a pull of $\frac{1}{10}$ of its weight. Under the most favorable conditions, then, it will require two 1,500-pound horses or three 1,000-pound horses to operate a 14-inch plow, and when plowing becomes extremely hard at least four 1,500-pound horses should be used for this work.

As a general rule the number of horses used on our plows should be increased. At the present time the abreast hitch is standard for plows. With this style of equalizer it is impossible to use three horses on a sulky plow or four horses on a gang plow (no horse walking on the plowed ground) without causing "side-draft." If more horses are used, the "side-draft" is increased. Not only does this method of hitching increase the draft of the plow from 15 to 30 percent, but the horses are crowded, which leads to tramping and excessive heating. Without going into the theory of the case it can definitely be stated that "side-draft" cannot be eliminated when the abreast hitch is used, without working some of the horses on the plowed ground. Therefore, in order to secure an equalizer which is desirable both from the standpoint of the



FIG. 67. Four horses pulling a two-bottom, twenty-eight-inch gang plow, with Gulley dynamometer attached. The lead team shows the folly of hanging traces, which handicap was subsequently overcome with weights. See Fig. 62.

horses and the implement, some form of tandem hitch must be used. Hitches based on this plan have been devised, which eliminate "side-draft" and give the horses abundant space in which to work.

In designing these hitches due attention has been given to the demands that naturally come from various sections of the country. For example, in the East it is desired to use four horses, in the Central states six, and in the far west eight or ten. Simplicity was striven for, with the result that a hitch has been developed which can be used for 2, 4, 6, 8 or 10 horses by merely selecting the proper units. In order to facilitate the discussion the 10-horse hitch will be described first. The diagram of this equalizer is shown in Fig. 63. The horses are worked in five pairs. When plowing, one horse of each team walks in the furrow, the lead team works against the third swing team, and the pull between these two teams is equalized by a two-foot chain passing around a pulley. From one end of this chain a drawrod, eleven feet long, goes to the

lead team. The third swing team is attached to the other end of the chain. The lead team and the third swing team work against the second swing team. The pull is equalized by the block and tackle placed immediately behind the second

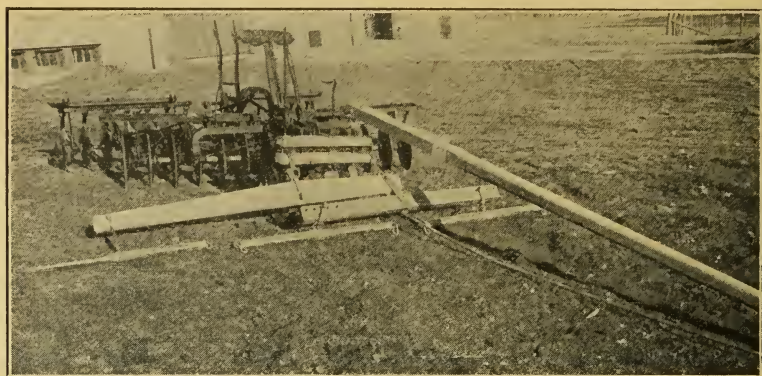


FIG. 68. A six-horse equalizer for the disk harrow.

swing team. This block and tackle consists of one movable and one fixed pulley. A draw rod, eleven feet long, leading ahead, is attached to the movable pulley. A chain three feet six inches long is threaded through the pulleys. The second swing team is attached to the free end of this



FIG. 69. A four-horse team with pulley equalizer furnishes abundant power for hauling.

chain. The first swing team works against the three teams ahead of it. The pull is equalized by means of a block and tackle, consisting of a movable, single-pulley block and a stationary double-pulley block. The first swing team is attached to the free end of the chain with which this block is threaded. The wheel team works against the four teams ahead of it. The pull is equalized by a block and tackle consisting of

one double-pulley, movable block, and one double-pulley, stationary block, which is attached to the plow. The wheel team is attached to the free end of the chain with which these blocks are threaded. This hitch, then, consists of a series of block and tackles, so arranged that each team works against the team or teams ahead of it, and is for use on a 3-bottom, 36-inch or 42-inch gang plow. The proper length of double-trees to use is given at the end of this article. Too much emphasis cannot be laid upon the necessity of using the lengths of eveners specified, if "side-draft" is to be eliminated.

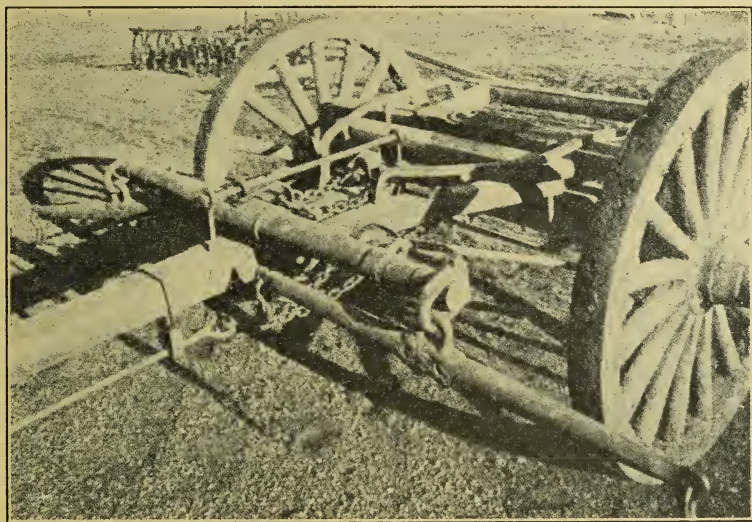


FIG. 70. Close-up view of a four-horse wagon equalizer.

Objections are frequently made to the tandem style of hitch, on the grounds that the draft of the load is increased and that it is very hard on the lead team or teams. The result of practical experience in the field leaves no room to doubt the validity of these objections, at least it furnishes ample evidence of the fact that a lead team generally works at a disadvantage. A careful study of the tandem hitch in field use reveals some very interesting facts, which throw much desired light on this perplexing problem. These conditions are admirably illustrated in Fig. 67, where a four-horse team is working "two-and-two." The tugs of the wheel team come away from the shoulders at approximately right angles, while in the case of

fastened. The other end of the single strap is attached to a ring on the draw rod. The hitch is so designed that when any team pulls forward the draw rod is pulled back, which tightens the buck strap, and thus holds the team from going ahead. This system of "tying-in and bucking-back" is illustrated in Figs. 64 and 65. It is very important that the buck straps be



FIG. 72. A true line of pull over a true line of draft. Horses work in comfort. No jostling or overheating, and no stepping on each other at the turns.

so adjusted that the team is checked just before it reaches the forward end of the play allowed by the equalizers. When these buck straps have been adjusted to the proper length, snaps should be inserted so that the matter of hitching-up and unhitching will be facilitated as greatly as possible. These buck straps may well be left on the harness. Ropes can be used for "bucking-back and tying-in," if desired.

An 8-horse equalizer, Fig. 72, is secured by detaching the front end of the rear draw rod in the 10-horse hitch and taking the front units. The eight horses are driven as explained above. This hitch can be used on 3-bottom, 36-inch or 42-inch gang plows, and, in fact, where large horses are available, it is preferable to the 10-horse hitch.

To secure a 6-horse equalizer, Fig. 66, the two rear units of the 10-horse hitch are removed. This hitch will be especially useful on a 2-bottom, 28-inch plow, for fall work, when it is desired to plow deeper than usual, or when the ground becomes hard. It should be especially useful in plowing for the seeding of winter wheat.

The 4-horse equalizer, Fig. 67, is secured by removing the three rear units of the 10-horse hitch. It is merely a fixed pulley with chain and draw rod. This hitch should be used

whenever 4 horses are worked on a gang plow. It can also be used to advantage on the sulky plow, whenever the conditions are such as to make the draft relatively heavy.

The disk-harrow does not present the perplexing hitch problems met in connection with the plow. By using the tongue truck, four horses can be worked abreast with entire satisfaction. When it is desirable to use more than this number of animals, some difficulty is experienced, because the outside horses swing into the implement on the turns. This trouble can be overcome by using the tandem hitch. When six horses are worked on the disk-harrow, a "3-and-3" combination can be

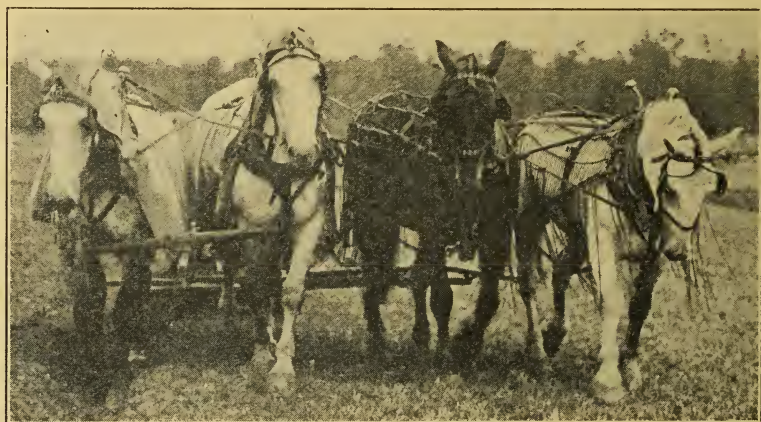


FIG. 73. Four horses abreast on a two-bottom 28-inch gang plow. This illustrates the side draft and the twisted positions horses take. By this method 15 to 30 percent of the power is lost.

used. The draft between the two tandems is equalized by means of a block with two pulleys, around which a chain passes, Fig. 68. The rear team is attached to one end of this chain and a draw rod, 11 feet long, to the other end. In order to allow 40 inches of space for each horse, the outside of the pulleys should be 20 inches apart. It is recommended that the pulleys be at least 4 inches in diameter, larger than those shown in Fig. 68. Four lines are used for driving this team. If it is desired to use 8 horses on a disk-harrow, a tandem arrangement, "4-and-4," can be secured by using two 4-horse equalizers and balancing the pull between the wheel and lead teams by means of a single pulley, a chain, and a draw rod.

The standard hitch for wagons is the 2-horse equalizer. In

many instances two horses do not furnish sufficient power for hauling work. Frequently the draft animals are overworked in hauling, while other horses are standing in the stable, spoiling for want of regular exercise. Due to practical conditions, which must be met, it is not desirable to work four horses abreast on a wagon. Our roads are not suited to this hitch. Fig. 69 illustrates a 4-horse tandem hitch, which can be used on a wagon. The pull between the wheel and load team is equalized by chains passing around two pulleys, which are placed on the tongue pin. The details of this hitch are illustrated in

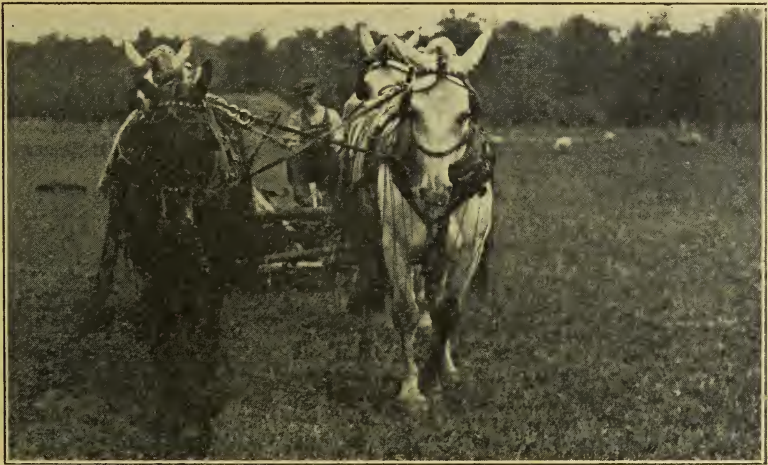


FIG. 74. The same plow and horses as that illustrated in Fig. 73, with the teams hitched tandem. No side draft. All horses working in comfort.

Fig. 70. To keep the chains from coming off pulley guides are used. Spreaders are attached to the chains in such a manner that they prevent either team from going too far ahead. The front support for the draw rod is fastened on the end of the tongue, which will prevent the neckyoke from coming off.

The methods of hitching and driving horses here described are relatively new, especially in the central and eastern part of the United States. They are offered to the public only after careful experimental work and a thorough study of all the details. The preliminary work has been finished. It now remains for practical horsemen to put them into general use, for the purpose of determining just which units are best adapted to meet the needs of different communities and sections of the

country. One practical farmer using these equalizers successfully brings them to the attention of all his neighbors, who may see and judge for themselves regarding the merits of these hitches.

Singletrees 30 or 36 inches long should be used. The width of eveners to use with different implements, all measurements given from center of outside hold to center of outside hold, are as follows:

PLOW HITCHES

- Ten-horse hitch (2, 2, 2, 2 and 2).
 - 3-bottom, 42-inch plow, eveners 60 inches.
 - 3-bottom, 36-inch plow, eveners 50 inches.
- Eight-horse hitch (2, 2, 2 and 2).
 - 3-bottom, 42-inch plow, eveners 60 inches.
 - 3-bottom, 36-inch plow, eveners 50 inches.
- Six-horse hitch (2, 2 and 2).
 - 3-bottom, 36-inch plow, eveners 50 inches.
 - 2-bottom, 28-inch plow, eveners 46 inches.
- Four-horse hitch (2 and 2).
 - 2-bottom, 28-inch plow, eveners 46 inches.
 - 2-bottom, 24 inch plow, eveners 40 inches.
 - 1-bottom, 16-inch plow, eveners 36 inches.

DISK-HARROW HITCHES.

- Eight-horse hitch (4 and 4).
 - Use 80-inch eveners.
- Six-horse hitch (3 and 3).
 - Use 60-inch eveners.

WAGON HITCHES.

- Use ordinary wagon equalizer.

The four factors which, combined, determine the abundance of the harvest are the seed, the soil, the culture, and the climate. Man determines the kind of seeds he will sow, and whether or not they shall inherit high-producing powers. He determines to a considerable extent the productiveness of the soil, and with judgment and skill he regulates the process of cultivating, harvesting and housing the crop. It is only the climate which he cannot modify, but to it he may adapt his practices and his plants.—*The Essentials of Agriculture, Waters.*

About three-fourths of the farmers of central United States are so-called grain farmers. There has always been a large proportion of grain farmers; and, furthermore, there always will be, and always must be, for the world does not live by meat alone, nor even upon meat and dairy products. Bread is the staff of life.—*Soil Fertility and Permanent Agriculture, Hopkins.*

LIVESTOCK.

THE PASSING SCRUBS.

By F. B. NICHOLS, formerly associate editor *Farmers Mail and Breeze*, in
The Country Gentleman.

GRAFTERS who deal in stallions are now limited to less than half of the United States for their operations. This is not so bright a field of effort for men with questionable character and still more unknown stallions as it used to be. The "good old days" of the stallion faker and his stool pigeons—men on the inside of the fake deal—are gone forever.

Of the states which have enacted stallion laws, twenty-one—California, Colorado, Idaho, Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Montana, Nebraska, New Jersey, New York, North Dakota, Oklahoma, Oregon, Pennsylvania, South Dakota, Utah, Washington and Wisconsin—have carried on the work long enough so that results are very apparent and satisfactory. The effort in improving horses by law was started by Dr. A. S. Alexander, of the University of Wisconsin, the grand old man in the movement for better horses and for making their production and sale a strictly honest business. A law which he fathered passed the legislature of Wisconsin in 1905, and it went into effect January 1, 1906. It has had a big influence in raising the quality of the horses of that state.

There is some variation in the laws of the different states, as might be expected, but all are based on the fundamental factor of making the exact truth about the animal known. Certainly no one who has the best interests of the business at heart can object to this. The effect of letting the truth be known can be seen in every state having stallion laws. In Kansas, for example, when the law went into effect, eight years ago, 2,599 purebreds and 3,766 grades and scrubs were licensed to stand for public service. Only 40.8 percent were purebreds, while 59.2 percent were grades and scrubs. This was a mighty bad showing—worse even than had been expected. During 1918, however, licenses were issued for 3,269 purebreds and 1,818 grades and scrubs, or for 64.2 percent purebreds and only 35.8 percent grades and scrubs. In other words, 25 percent

more purebreds were licensed in 1918 than in 1910, and 49 percent fewer grades and scrubs.

Furthermore, 2,954 purebred draft stallions and 315 purebred light stallions were licensed in 1918, as compared with 1,892 purebred draft stallions and 707 purebred light stallions in 1910. During this period there was an increase of 56.1 percent in the number of purebred draft stallions and a decrease of 55.5 percent in the number of purebred light stallions. As

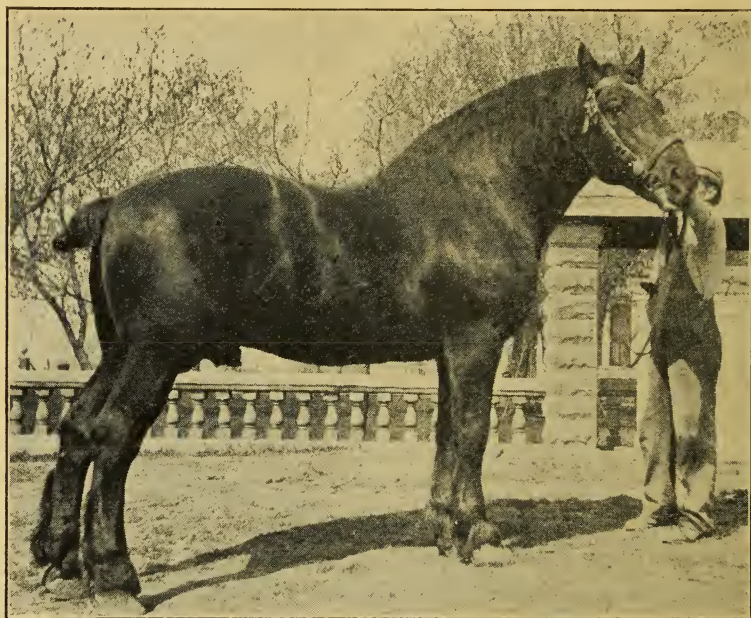


FIG. 75. The state stallion laws, by supplying the truth in every case, are doing much to raise the standard of horse-breeding efficiency.

most of the effort in Kansas is in breeding draft animals, this is an encouraging change. During this same period there was an increase of 74.7 percent in the number of purebred Percheron stallions, and these animals represented 79.3 percent of all of the purebred stallions standing for public service in 1918. It also was found in Kansas that before the stallion law was passed more than 2,000 grade and scrub stallions were advertised as purebred, while after the law went into effect not one was so advertised. In his work of enforcing this law Dr. C. W. McCampbell, secretary of the Kansas Livestock Registry Board, and his successor, F. W. Bell, have compelled the re-

funding of more than \$100,000 obtained from farmers for horses with fake pedigrees.

The table following shows the changes that have taken place since 1910, when the Kansas stallion license law went into effect:

BREED.	American Saddle...	Belgian.....	Cleveland Bay...	Clydesdale.....	French Coach.....	French Draft.....	German Coach.....	Hackney.....	Morgan.....	Park...	Shetland.....	Shire.....	Standardbred.....	Suffolk.....	Thoroughbred.....	Purebred.....	Grades and Scrubs...	Total.....
1910.....	16	133	15	41	35	261	38	12	17	1,342	9	114	553	1	12	2,599	3,766	6,365
1918.....	27	194	2	42	11	298	27	7	24	2,345	10	73	197	2	10	3,269	1,818	5,087
Decrease or increase...	+11	+61	-13	+1	-24	+37	-11	-5	+7	+1,003	+1	-41	-356	+1	-2	+670	-1,948	-1,278

The grade and scrub sires are passing—three rousing cheers!

"We find," said Doctor Alexander, in speaking of the conditions in Wisconsin, "that a lack of patronage is steadily retiring the scrub sires. That reason is given generally by owners who do not renew their scrub certificates. One owner of a scrub stallion, who was asked to submit the poster of his scrub stallion, wrote candidly: 'I did n't get any posters printed, because there is a stallion that is getting all of the mares here. I did n't stand my horse and I don't think that I shall get any mares, because my horse is a scrub and the other horse is a purebred.'

"We are glad to note this excellent effect of the stallion law, which labels every stallion correctly for the information of the owners of mares. It is leading them to patronize the owners of purebred sires. Of course, this is not true in all cases; some mare owners have not yet abandoned the foolish and money-losing practice of breeding their mares to scrub sires and so obtaining scrub colts, which have a small value and a low efficiency as compared with the colts by purebred sires and out of sound, suitable mares. Grade sires beget scrub colts. Only purebred sires can beget grades.

"In 1916, 167 new grade stallions were enrolled in Wisconsin, making the total number for the state 922 head. In 1917, only eighty-five new grades were enrolled, a decrease of eighty-two head, while the total for the state dropped to 817, a decrease of 105 head. Grade stallions as a class have been improved considerably in Wisconsin in the last five years. It

seems likely that only grade stallions that have several top crosses of pure blood will be retained for breeding purposes, and such sires will have a lessened detrimental effect on our horsebreeding. The present number of grade stallions, however, is far too high, and breeders would do well to reduce their number as rapidly as possible. Of the grade sires retired in the last year, thirty-one were castrated, ten were shipped out of the state, twenty-four died, and ten were withdrawn on account of unsoundness, lack of patronage or old age."

As might be expected, one of the greatest troubles in getting the stallion laws observed properly is to see that the papers are all right. As experience has demonstrated that purity of breeding is an absolute necessity in a worthy sire, the selling value of a good purebred individual is much greater than the selling value of a grade with equal individuality. Many unscrupulous men who realize these facts have been issuing so-called registry certificates for grades or short-bred horses, with the hope that an unsuspecting public would accept these worthless registry certificates as an evidence of purity of breeding, and unfortunately many persons have done so. Other unscrupulous owners have been substituting grade or scrub stallions for purebreds that have died or been sold without registry certificates.

Worthless registry certificates found in the states having stallion laws can be divided into four general classes:

Those issued by nonrecognized registry associations.

Papers issued by recognized associations in which the grade or scrub stallions have been substituted for purebreds for which certificates were originally issued, and the certificates changed to correspond in age and color with the horse substituted.

Certificates issued by a recognized association for purebred horses which have since died and for which grades have been substituted with no changing of the registry certificate.

Certificates issued by recognized associations upon representation since proved to have been false.

The largest number of worthless pedigrees detected by the state livestock registry associations belong to the first class, and many absurdities have been noted in checking these so-called certificates. In most cases neither sire nor dam is a purebred horse. In many cases the sire given is younger than

the horse in question. In others the sire is said to be a pure-bred, imported stallion, but investigation shows that the sire was not imported till a year or two after the animal in question was foaled. In one case six generations had been crowded into eleven years, and in another seven generations in nine years. One of the fake associations always requests that the applicant be sure to mention the breed his horse resembles most. By having access to a list of recognized, reputable registry associations, one need not be victimized by one of these worthless registry certificates, as every one bears the name of the nonrecognized so-called registry association by which it was issued.

Worthless pedigrees of the second group, in which certificates from recognized associations have been changed to correspond to the grade animal sold, are not easily detected, as is evidenced by the fact that several old and experienced horsemen of the country have been victimized by worthless papers of this kind. When the papers are tampered with the work usually is done very cleverly. There are two principal reasons why unscrupulous men tamper with and change registry certificates. The first is to deceive an unsuspecting purchaser in regard to the age of a horse, and in this case it may be the animal for which the certificate was issued; the second reason is to make the certificate correspond in age and description with the age and description of a grade horse that has been substituted for the horse for which the certificate was issued.

Before a purebred stallion license can be issued by most livestock registry boards, it is necessary that the owner send in the registry certificate for inspection, and it is surprising to note the large number of these certificates that have been tampered with. In some cases only the age, in others only the description, while in others both the age and the description have been changed. In most cases these changes have been made so cleverly that it is only by a careful examination and checking with the various stud-book records that these changes can be detected. A few typical cases may be of interest: An Illinois man owned a fourteen-year-old, gray stallion, registered in the Percheron Society of America. This registry certificate as originally issued represented a pure-bred Percheron stallion, but as the horse was growing old his value was beginning to depreciate. The owner fixed up fake papers for the

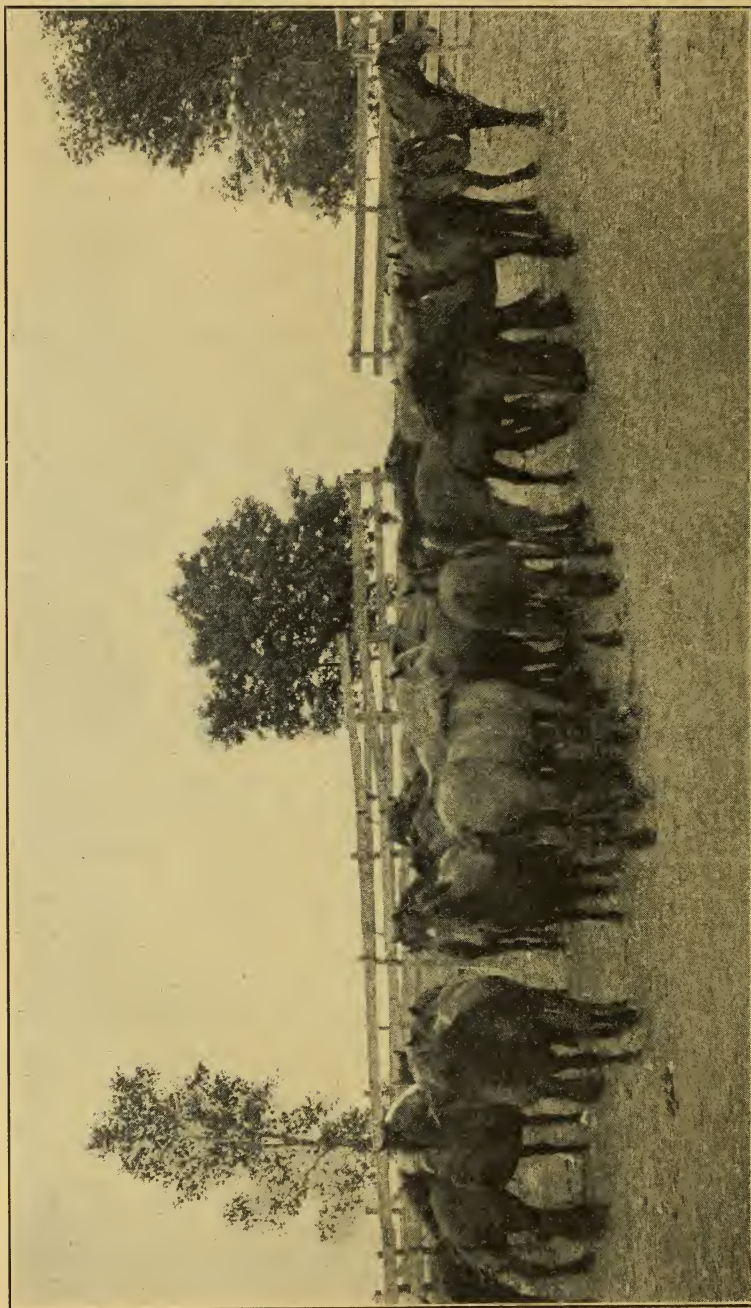


FIG. 76. The only sure way of getting a fine crop of colts is to use breeding stock of known quality. This is a herd of purebred Butler county Percherons.

horse and took him to Oklahoma, where he was sold. This man kept the genuine registry certificate which had been issued for this horse. In a near-by town he bought a grade horse. This animal was five years younger than the other horse, but of the same color. In order to substitute the grade for the purebred it was necessary to change the date of foaling on the genuine registry certificate. This grade horse was given a short feed and was taken to Kansas and sold to an unsuspecting man as the purebred Percheron for which the registry certificate was originally issued.

In another case a black horse with no white markings was sold, and a registry certificate supplied that had been issued by a recognized, reputable association. This certificate stated that the horse for which it was issued was black. The stud-book records stated that this was a black horse with a star on the forehead. A careful examination of the certificate showed the word "star" had been cleverly removed. Upon further investigation it was found that the stallion that really was mentioned in the certificate was a black horse with a large star on the forehead; that he had died, and a black grade stallion, with no white markings, had been substituted. After the word "star" was removed, the description corresponded with the horse substituted.

The third class of worthless certificates, issued by recognized associations for animals that have since died, have not been tampered with, but substitutions—usually grades—have been made for the horses for which they were originally issued. It is sometimes amazing, in dealing with this class of fakers, to note the credulity of some persons when they buy a stallion, and the ease with which a smooth-talking stallion salesman can explain discrepancies, such as the presence of a large star in the description given in the registry certificate but not present on the horse, or the presence of a stripe in the face of the horse and one or two white feet, but with no mention of these markings in the registry certificate. It seems absurd to think that a sane person would buy a horse supposed to be a purebred, with such differences existing between a description in the certificate and the actual color and markings of the horse in question; but hundreds of such horses have been sold in practically every state, and in almost every case where there was a difference found a substitution had been made.

Worthless registry certificates, issued by recognized associations on representations which have since been proved to have been false, are the most deceptive and pernicious of all. A good many of the worthless pedigrees belong to this class. In some cases two or more colts have been registered from the same mare during the same month of the same year. In other cases grades have been registered as purebreds.

All of these things show that a person cannot be too careful in regard to the papers he accepts with a horse supposed to be registered. If he has decided to invest in one or more purebred horses he should make a thorough investigation of the integrity of various breeders and dealers, and make his purchase of those who are reliable and honest. The prospective purchaser should insist that the horse which he purchases be registered correctly in a stud book recognized by his state livestock registry board. A man should never buy a horse that does not correspond in every way with the age and description given in his registry certificate. He should insist on the incorporation in his contract of the provision that the horse purchased must pass inspection as a purebred by his state stallion registry board. These boards are created for the benefit of breeders, and they are always glad to check and pass on the merits of a pedigree, and to supply information regarding matters of registration.

Stallion patrons should note very carefully the breeding of every stallion they patronize. A state license will tell at a glance whether the animal is a purebred, cross-bred, grade, or scrub. Mare owners must never lose sight of the fact that it is upon the good, purebred horses of the country that we must depend to improve the quality of the breeds. The state stallion laws, by supplying the truth in every case, are doing much to raise the standards of efficiency. Quality breeding has now a better chance than it had in the past.

FARM PRODUCTION OF BEEF.

By DAN D. CASEMENT, ranchman, Manhattan.

IN the founding of a herd or in its subsequent improvement, I believe the vital objects that should be kept in mind constantly are quality and character, always coupled with size and scale; for your purpose is to produce a beef animal and, since beef is bought by the pound, excellence of quality can never entirely compensate for lack of bulk.

By character we mean that intangible thing that a herd of cows and their progeny possess when they have been bred for years along correct lines. It is most noticeable in some of the large herds of the range states where an intelligent breeding policy has been consistently followed for years. Although hard to describe, it is easily recognizable. So strong has it become in some instances that it is no exaggeration to say that droves of steers from certain well-known herds can be identified, no matter in what unexpected quarter they may be encountered, almost without seeing the brand. Uniformity, of course, is the striking requisite to character. Your calves will always sell at a disadvantage when they lack this essential.

Quality, too, is a thing that can be recognized in an instant but not described in a word. It implies good conformation, straight lines, a broad head, a placid eye, a loose, mellow hide, soft hair—in short, all of the numerous characteristics by which you are assured that the bullock possessing them will finish quickly and economically and handsomely and will do his full share toward returning a profit to his feeder.

How, then, are we going to breed up a herd of beef cows in the surest and most rational way, that will have these characteristics and reproduce them? We may start with such cows as we have at hand, and, by the use of well-selected bulls, produce a uniform, attractive, and profitable herd. But this takes a long time. The quicker and easier plan is to start with heifers of the right type and mate them with the right bull. Fix in your mind a definite ideal of the kind of animal you wish to produce. If you happen to know some successful breeder who has already attained that ideal you could not do better than to cultivate his confidence, apply his methods, and act largely on his advice. There will inevitably be disap-

pointments, but they will not be unprofitable if we take to heart the lessons they teach.

The right bull is, of course, the all-important item. If your observation has convinced you that certain blood lines are essential to the ideal you have in mind, it would be well to adhere closely to those lines. By that policy your herd will most quickly acquire character. The purchase of a cheap bull is almost invariably poor economy. The right bull is always desir-



FIG. 77. A chuck roast from a purebred Aberdeen-Angus steer, showing wonderful marbling for a yearling. The outside cover of fat is light, leaving a maximum of lean meat.

able, and, consequently, generally high-priced. But for our purpose he does not need a record on the show circuit. Indeed, such an experience probably will have disqualified him completely for our use. But if he has the blood and the exact qualities you seek, without having his digestion impaired and his frame overloaded for a show career, get him if you can, at such a price as circumstances and the size of your cow herd will justify.

With a definite ideal in mind, and with promising animals out of which to attain it in hand, the question of their management may next be considered. In this regard one's policy will, of

course, vary with circumstances and conditions. I can only state the plan that I have found most convenient and profitable. The foundation of the small cow herd that is now on my farm was a bunch of Colorado heifers, bought as yearlings in the spring of 1911 after wintering on Vega hay on an old Mexican grant in the San Luis Valley, where their ancestors had run for twenty-five years or more. Vega hay is not a good ration for calves and accordingly these yearlings averaged only 328 pounds when they came out of the cars at the end of their journey, about May 1. They certainly had a poor start in life, except in one important particular. Back in the eighties, the herd from which they came had been owned by a remarkably clear-sighted and conservative breeder. He had started with a bunch of registered Hereford cows and had persistently mated them with registered bulls of the blood and type that he fancied. This policy had been continued in a general way by his successors.

By thus going into detail concerning my own start I merely wish to emphasize the importance of the most desirable attribute that attached to these little half-starved calves and to indicate how it had been fixed in them. That attribute was character, and the man responsible for it was George Adams, who laid a foundation for the "L. C." herd that has stood the test of time and changing fortune.

The following spring these heifers were bred as two-year-olds to three good bulls, all carrying similar blood lines. The bulls were turned with the cows on June 1 and were taken out ninety days later. This plan insures uniformity of size in the calf crop and simplifies herd management, as the calves can all be weaned the same day, leaving no "shorts" to carry through the winter on their mothers. If the bulls are young and the cow herd is of such size as to require more than one bull, it seems a good idea to turn them out singly, on alternate days, feeding a little grain on the day of rest. This plan would apply only when the pasture is less than a section in size and the cows not too numerous. In this way harmful and useless duplication of function can be minimized and a maximum calf crop secured. In late July or August it is advisable to build a creep in the pasture near water where the cattle congregate. A self-feeder inside of the creep can be filled with shelled corn and oats, and here the calves may learn to eat grain. Thus the

hardships of weaning may be anticipated and reduced to a minimum.

The character of the herd should be constantly strengthened and improved by placing the least desirable animals with the top heifer calves of its annual product. The best time to select the cows to be discarded is before weaning the calves. Thus the usefulness of a cow can be estimated accurately by the kind of calf she has at her side. A cow that has brought an inferior calf by a good bull should be marked for rejection, no matter how attractive she herself may be as an individual. Such cows, with those that are known not to be with calf at weaning time, should make up the bulk of the annual discard.

After weaning the calves, the cows can go into winter quarters and be maintained on an abundance of rough feed. Alfalfa, with some corn fodder or the occasional use of a stalk field, will serve; or silage corn balanced either with alfalfa or a light allowance of cottonseed meal. Whatever roughage is used, they ought to be kept full and contented. In this way they can be well wintered at the least possible cost and will consume much rough feed that could not otherwise be readily disposed of.

The logical way to handle the calves will depend on a variety of circumstances. Their breed, their quality, the requirements of the market, and the cost of feed are all factors that should influence the determination of the most desirable method of handling them.

As to breed, that question will have been settled, probably, at the outset, by the personal inclination of the breeder, or perhaps by his inherited preference for Shorthorns or Herefords or one of the black-polled breeds. If he has been so fortunate as to choose the breed that is now almost universally recognized as the one best adapted to the conditions of Texas and the range states, and if his herd is of the requisite quality, he can find for a time, at least, a profitable outlet for the best of his male calves as bulls to supply the western and southern demand. If such is his intention, careful selection of calves chosen for this purpose, and strong feeding from weaning time until sold, are matters of the utmost importance. As an indication of the rewards that have attended this practice for the past four years, I might state that approximately half of the four crops of bull calves from my herd have changed hands on the Denver market at a gross average price of more than \$140

each. However, it cannot reasonably be expected that this outlet will be much longer available. Among the better herds of grade Herefords in Kansas and the western states, the custom of saving male calves to sell as bulls has become so common as to have affected noticeably and adversely the quality of the white-face steers that are now marketed from this territory. It is a matter of only a little time until this outlet will be permanently closed, for registered bulls are rapidly increasing in numbers and some of the western states and many local livestock associations are discriminating by laws and rules against the use of unregistered bulls on their ranges. When this demand ceases there will come out of the West in large numbers steers of such quality as we have never seen before, and it is this impending competition that we must be prepared to meet with the steer product of our Kansas cow.

In the disposition of the calves a matter of prime importance is the selection of the top heifers for replacements in the cow herd. These should be selected with the greatest care in such numbers as circumstances and a well-matured plan may dictate. If you choose the deepest, most feminine- and motherly-looking ones, you cannot go amiss. They should be well maintained until spring with at least three or four pounds of shelled corn per head per day, and all the good alfalfa they will eat, or an equivalent silage ration properly balanced with cottonseed meal and supplemented with some dry roughage. They should be kept in a separate pasture away from the bull during their yearling summer. Whether or not it is advisable to breed them that fall I am not prepared to state. My experience in this regard has not been such as to warrant the recommendation of the practice. They can be thrown in with the cow herd and safely become a part of it at the beginning of winter.

A second selection of heifers, if they are only slightly inferior to the top cut, may be sold most profitably, under present conditions, as breeding stock. The demand for females of one of the breeds, at least, is just now unprecedented; but a little time will change this state of affairs.

As to the remainder of the calf crop, the whole tendency of the times seems to be toward making beef quickly with young animals; and so it is likely that a popular practice of the future will be to feed calves of both sexes to a quick finish. In fact, the custom is extensively followed to-day. In an age that puts

so high a premium on economy and efficiency and emphasizes so strongly the value of time, it is logical to believe that the policy of making a 900-pound beef steer in fifteen months will commend itself to the up-to-date breeder and feeder, as more logical than the old plan of growing an animal to weigh only 300 or 400 pounds more than this at the end of four years.

If the breeder adopts the custom of making baby beef, the greatest attention should be given to excellence of finish and economy of production—two items that are very difficult successfully to harmonize and obtain simultaneously. Close study of the experimental work of the agricultural colleges and their demonstrations along these lines will be found to be of the greatest assistance.



FIG. 78. The tendency of the present age seems to be towards specialization, and it is probable that in the future the occupation of breeder and feeder will be separated more distinctly than has been the case in the past.

The tendency of the present age seems to be toward specialization, and it is probable that in the future the occupations of breeder and feeder will be separated more distinctly than has been the case in the past. Possibly the breeder will more and more incline toward running his farm and pasture to their entire capacity with breeding cows, selling the product at weaning time to some specialist in the work of feeding and finishing beef. But if he elects to follow both branches of the industry, and if his feed and grass exceed the consumptive capacity of his cow herd, he may carry his steers for a year or two before selling them or putting them in his own feed lot. During the past season I had unusually good results from grazing a bunch of yearlings until the middle of August and then feeding about 110 days. These calves were wintered on three pounds of corn and alfalfa hay daily per calf, until April 1, when their ration was increased to six pounds for the last thirty days before going on grass. They went into the feed lot August 17, started

for market December 2, weighing 983 pounds, and sold for \$10.75 in Chicago.

On mature steers, also, I have had the best results from short feeds in the fall, beginning the middle of August. Under favorable conditions and with the proper ration, a four-year-old steer that has grazed well can be moderately ripened under this system in sixty-five days, while two- and three-year-olds will require a slightly longer period.

It is well to bear in mind that the cheap calf, apparently, is a thing of the past. The United States Department of Agriculture has carefully compiled figures indicating that a high-class beef calf, reared under such conditions as have prevailed in this immediate vicinity for the past four years (1913-1916),



FIG. 79. Norton county steers on full feed.

represents to his breeder at weaning time an average cost of thirty-eight dollars, and these figures are made on the basis of a 90 percent crop. How costly the calf will be if one's herd happens to be afflicted with that terrible bane of the cow man, contagious abortion, it is difficult to surmise.

If our calf is actually costing us thirty-eight dollars and we are selling him for this figure, we are engaged merely in the unprofitable occupation of swapping dollars, and must soon tire of it. But I am convinced that if we view the matter in the right perspective we shall find such is not the case. That cost is made up of many items that can properly be credited as profits—interest on the value of the cow—and this is a liberal and potential value rather than her actual worth for beef at the moment; income from grass, which you would regard as a satisfactory and profitable return if rented to a grazier; a round

profit on the roughage—often of poor quality and unsalable—charged to the cow, which profit you could obtain so readily in no other way; fertility added to your soil by feeding and grazing the cattle upon it; and lastly, the unearned increment which time and the evolution of our industrial and social conditions are rapidly and surely affixing to the value of the land which you own and use.

These profitable items are the ones on which stress should be laid in reckoning the cost of the calf. When we have gotten rid of our longing for purely speculative and spectacular returns from our operations, and are able to view the true facts of the business more philosophically and reasonably, we shall all be better and more contented farmers.

This is my honest belief, and the same principle applies, I think, to the business of feeding as well as that of breeding cattle, and to all other branches of the agricultural profession. When our friends, the packers, who finally manufacture our product, shall acquire something of a kindred vision, and apply it to their own operations, I'm sure we shall all be happier and shall live on better terms with each other than is the case at present.

KANSAS' LOSSES FROM ANIMAL DISEASES.

By GEO. M. POTTER, veterinary specialist, Kansas State Agricultural College.

KANSAS is essentially an agricultural state. She stands first in the United States in the production of winter wheat, alfalfa and the sorghums, and in other grains she takes high rank. In animal husbandry, too, she stands near the top, as might be expected from the ease with which the feeds necessary for the raising of livestock are grown. Large areas of grazing land aid in the economical production of the food-producing animals, and, on the other hand, our herds make productive those areas which are unsuited for other agricultural purposes. The Kansas Department of Agriculture gives the number of all livestock, exclusive of poultry, in Kansas January 1, 1919, at 5,920,683 animals, valued at \$361,868,705.

From the above the reader can gain an idea of the very great importance of the livestock industry to the agriculture of Kansas. It is only by converting our grasses and forage crops, which grow so abundantly, into animals whose products are used as food, clothing, and in the arts, that we can market

much of the produce of our farms and ranches. Anything, therefore, which materially interferes with the production of livestock should be cause for serious concern to the Kansas farmer. Animal disease is such a factor. It is true that there are many unfavorable conditions surrounding and hampering the industry; drought and storm frequently play havoc with the crops and herds, and fluctuating markets often deprive the producer of his reward. These things the grower of livestock cannot prevent, but with disease this is not true. Man himself is largely responsible for the prevalence of disease, and he can, by making his methods and practices conform to the laws of health, prevent disease from seriously hampering his activities. It is of this phase of the problem that we shall write.

Men are prone to think and speak of diseases as new, and in a sense they are new when first introduced into a territory, but many of them are older than recorded history. Anthrax, or "murrain," destroyed the cattle of the Egyptians in biblical times, and Moses, in prescribing rules for the eating of meat by the Israelites, described accurately the lesions of tuberculosis. Blackleg has been known for centuries in Europe, and "abortion disease," too, has troubled cattle owners for many years. The wide dissemination and increased prevalence of the various diseases has been brought about by the great traffic in animals and the insanitary and careless manner in which the business has been conducted.

That the control of great animal plagues is not a hopeless undertaking is shown by the results attending the efforts of our federal sanitary authorities. Some diseases have been eradicated completely, while others have been reduced to the point where but little more effort will remove them from our country. Contagious pleuro-pneumonia of cattle was eradicated twenty years ago; four times has foot-and-mouth disease been stamped out; and five years more of systematic work will see the end of the cattle tick, the disseminator of Texas fever, which has prevented the development of the most promising cattle section of the United States. Even tuberculosis and hog cholera are beginning to yield to the country-wide attack.

There are dangers, however, of which most stockmen are not aware. In other lands are dangerous diseases constantly

threatening to gain entrance, and they are kept out only by the eternal vigilance of our federal veterinarians at the ports of entry. There are foot-and-mouth disease, rhinderpest, and surra, which if once firmly established might never be eradicated, and they would cause untold millions of loss to our animal husbandry. Others might be mentioned, but these will serve for illustration.

Cattle are the most numerous as well as most valuable class of livestock in Kansas, consequently their diseases are of first importance. Tuberculosis will probably always remain the most important of animal diseases, because science has demon-

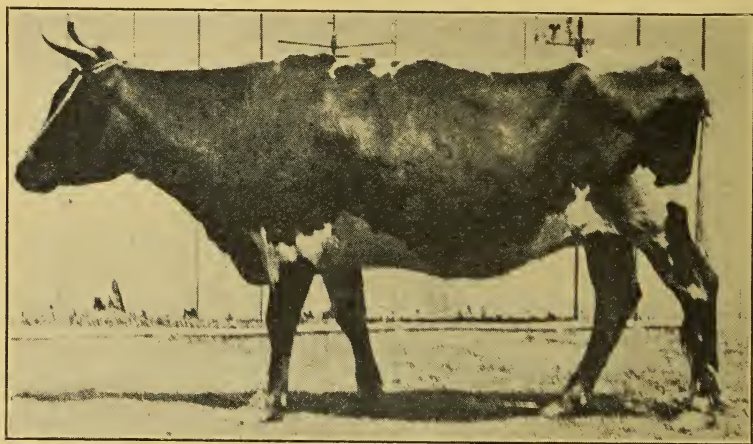


FIG. 80. A cow apparently in good health but affected with tuberculosis for more than six years. Many tubercle bacilli were found in the feces.

strated that it is transmissible from animals to man. It is more than a coincidence that this disease has for long been the most destructive disease of both cattle and human beings. The dairy cow has been called "the foster mother of the human race." Everyone is aware of the part cows' milk plays in the nourishment of our infants, our children, and the sick. When we stop to consider that in the great dairy sections from 10 to 50 percent or more of the herds are infected, and, furthermore, that in one large city 25 percent of all cases of tuberculosis of children treated in the hospitals were demonstrated to be of bovine origin, we begin to appreciate the danger of bovine tuberculosis to man.

The case against tuberculosis does not rest alone on the

menace to human health, however. The financial loss is very heavy. Cattle, like persons affected with consumption, become emaciated and die. This is a chronic, slow-acting disease, and the affected animal may linger along for months, eating the feed and receiving the care of the owner, who always is hoping that she will recover and again become profitable. The loss from lessened milk production in dairy cows and deaths of both beef and dairy cattle is exceedingly great. In addition, the condemnation because of tuberculosis of carcasses and parts of carcasses of cattle and hogs, in federal inspected slaughter houses, is almost beyond comprehension.

The saddest part of the whole matter is that this great load of human suffering and tremendous financial loss is in great degree needless. Bovine tuberculosis can be controlled. This fact has been demonstrated beyond a doubt by the results obtained in the battle against this disease in the portions of Maryland and Virginia adjacent to our national capital. Several years ago the city of Washington passed an ordinance requiring the testing of all dairy herds supplying that city with milk. On the first test it was discovered that 18 percent of the animals were tubercular, which, by the way, is not an unusual percentage in dairy sections. After three years of systematic testing the loss was reduced to 2 percent, and doubtless the disease could be eliminated completely if testing were made universal. Many large herds in various parts of the country have been freed and kept free by periodic testing and the removal of reacting animals.

Public sentiment has at last been aroused and a determined effort is being made in a country-wide campaign to eradicate tuberculosis. A plan has been worked out by the United States Livestock Sanitary Association, a body composed of state sanitary officers and stockmen, and approved by the U. S. Department of Agriculture, by which representatives of the department and the state will test free of charge pure-bred herds, on agreement of the owners to observe certain requirements. Provision has been made for reimbursing owners for animals destroyed because of the disease. Herds freed from tuberculosis according to this plan will be placed on an accredited list, and they will enjoy certain privileges in the way of shipping from state to state, advertising, etc. This plan will be known as the "federal accredited tuberculosis-free herd plan."

(NOTE.—Details of the plan can be secured by writing to the office of the State Livestock Sanitary Commissioner, Topeka.) It is thought that as its advantages become known it will be extended to include all herds.

The tuberculin test is made the basis for the work of eradication. Through this test the affected animals in a herd are detected and they can then be removed. Efforts have been made in years past to discredit this test, because of certain limitations, apparent failures in the hands of inexperienced persons, and its fraudulent use in many cases. It has held its own, however, and official testing in the hands of competent operators has proven to be as reliable as any similar test we have.

There are certain phases of the work which the average owner of cattle, unfamiliar with medical matters, seems unable to comprehend. The slaughter of all cattle reacting to the test, especially as many of them appear to be in perfect health, challenges his sense of propriety. And when these animals are examined at time of slaughter and only slight lesions of disease are found in some cases, he is convinced that a mistake has been made. However, many years of study and experience has demonstrated that we cannot afford to temporize with such an insidious disease as tuberculosis. We have no cure for it; neither have we any reliable means of determining when an animal becomes a disseminator, except by frequent laboratory examinations, which is impracticable. Cows which spread the germs of the disease may do so intermittently and might be missed at any given test. Unfortunately, the tuberculin test does not indicate the extent of the disease in the animal body. Consequently, the only safe way is to slaughter all reacting cows. Only with a cow of exceptional value would it be worth while to segregate her and give her the special care her condition demands for the sake of the calf she might produce.

Investigations have shown that certain cows may have the disease in a very mild form for several years, may be in apparently good health, and yet be dangerous spreaders of the disease. In the absence of the tuberculin test they might never be suspected. Fig. 80 illustrates such an animal.

There is another essential procedure in combating tuberculosis, which is sometimes overlooked, namely, the cleaning and disinfecting of the stables contaminated by the diseased animals. Experience has shown that simply to remove affected

animals is not sufficient for controlling this disease. Susceptible animals will contract tuberculosis from an infected environment. Quarters in which tubercular animals have been housed should invariably be thoroughly cleaned and then disinfected with a reliable disinfectant. Sunshine and adequate ventilation are of greatest importance in combating tuberculosis, as well as other infectious diseases. Sanitation is essential, too, as a preventive of disease. Animals, to be in perfect health, must live as closely to the natural state as possible. We too frequently imprison our animals in hovels, without windows to



FIG. 81. Filthy quarters are hotbeds of disease.

admit a ray of light or a breath of pure air, where no provision is made for drainage, and the animals must wade about in filth. Such conditions are not only conducive to the development of disease by lowering the vitality of the animal, but for the same reason production is lowered. At the same time the labor of caring for the herd is greatly increased and the fertility that should be returned to the soil, in the form of manure, is wasted. Aside from the question of disease, it is bad farming. Fig. 81 illustrates, better than any words, such a prison.

The Creator never intended any living creature to exist in such surroundings and man must pay the penalty of disease

when he forces his animals to live in such an environment. Tuberculosis if once introduced into such a place could ask no more favorable conditions for its rapid spread throughout the herd.

In this same connection the writer cannot refrain from expressing a few ideas concerning milk-borne diseases. Milk is nature's first and most complete food, intended for the nourishment of the new-born animal until it is able to lead an inde-

pendent existence. In nature it is drawn directly from the udder of the mother, without danger of contamination. Man, however, has artificially developed the milk producing function in the dairy cow and appropriates the milk to his own uses. There is no better food than pure milk, but it is at the same time an excellent culture medium for the growth of disease-producing germs. These germs, gaining entrance at the time the milk is drawn, may have multiplied millions of times by the time the milk reaches the consumer. Milk produced under the filthy conditions described above, and handled as a commodity, such as coal or potatoes, may appear to the casual observer as an

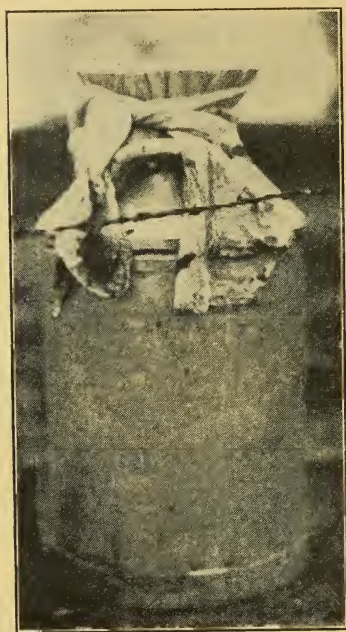


FIG. 82. A dirty rag used as a milk-strainer.

innocent white fluid suitable for food, but to the scientist it becomes an aquarium, teeming with myriads of vicious little monsters capable of destroying human life. Particles of manure, dropping from the filthy sides of the animal into the milk, have introduced tubercle bacilli and the filth germs which cause bowel disorders of children; inflamed udders have added the germs of septic sore-throat; and the typhoid fly, bred in excrement and feeding on filth, contributes the human diseases such as typhoid fever, scarlet fever and diphtheria.

Fig. 82 illustrates the carelessness of some milk producers.

In this case an old rag was used as a strainer for removing the visible dirt from the milk. In the presence of the photographer it was dropped into the manure of the yard, picked up again, and with only a shake to remove the coarsest particles of dirt was tied over the mouth of the can. Dirt is shown still clinging to the filthy rag. Such practices, born of gross-ignorance of the elemental principles of cleanliness, and an outrageous disregard for all sense of decency, cannot be too sternly repressed by the strong hand of the law. Fortunately for the public health, such practices are not universal. Clean milk can be and is produced in large quantities. The somewhat extreme examples given only to serve to emphasize the necessity of adequate supervision of the dairy industry.

Kansas has been fortunate in the past in regard to tuberculosis. Her cattle have been mostly beef cattle, living the natural life out of doors, and they have been almost entirely free from this disease. Most of the cattle that came into the state were from the ranges, and were likewise free. But a reverse movement of cattle is now apparent. Dairying has become an important industry and dairy cows are being imported in ever increasing numbers from the dairy states, where tuberculosis is rampant. Sanitarians are aware of the danger involved in this movement. They fear that dairymen, in their eagerness to get high-producing cows, will neglect the safeguards that are available and introduce the disease into their herds. That this is not a fanciful danger is shown by the results of numerous tests within the state. In one herd of beef cattle the owner found an unusual number of swellings about the throats of his cattle and suspected "lumpy-jaw." It was suggested that the trouble might be tuberculosis, and the herd was tested, with the result that 59 out of 60 reacted. The one that failed to react was a bull which had recently been introduced. A herd of fine purebred dairy cattle was entirely wiped out by this disease, and other cases might be cited where a large proportion of the herds have been condemned.

Emphasis has been placed on tuberculosis in this article not so much because of the losses that have been sustained, but to call attention to the danger that threatens, in the hope that Kansas may be spared the costly experience of other states.

Contagious abortion is probably the most important disease, from a financial standpoint, of all the diseases now affecting

our cattle. It, too, is a chronic, insidious disease, and its spread has been so stealthy and it has been so little understood that it has not received the attention which its importance deserves. This disease is now causing enormous losses to the cattlemen of Kansas. In a great many herds more than half of the calves have been lost, and in numerous instances the loss has approached 100 percent of the calf crop. Both beef and dairy herds have suffered. There is much misinformation regarding abortion disease, which leads owners to overlook the first cases and permit it to become firmly established in their herds. It is a particularly difficult disease to overcome, because of its very slow development and the absence of any symptoms that might indicate the presence of the disease in individual animals.

Many have thought that nothing could be done to check abortion disease, once it has gained entrance, except to sell the entire herd. Many valuable breeding animals that might have been restored to usefulness have been sacrificed because of this mistaken idea. Fortunately for the future of the cattle industry, nature provides for the welfare of her creatures and endows them with defensive forces for resisting disease. It has been discovered that much more than half of the cows that lose their calves because of this disease do so but once. They have acquired an immunity which thereafter permits them to carry their calves to maturity. In addition to this natural force for overcoming the disease, the general measures which are used in combating all diseases, such as the segregation of affected animals, treatment to promote recovery, and the cleaning and disinfecting of infected premises, are likewise effective in reducing the ravages of abortion. There have been cases where owners in despair have sent their herds to slaughter. It is nothing less than a calamity when a man who has spent half a lifetime in building up a fine herd of cattle, in a moment of discouragement, sends them to the shambles. More accurate information will in future prevent such occurrences. The writer urges a more hopeful view of the problem and better methods of herd management for the prevention of disease. Kansas Agricultural Experiment Station Circular No. 69 describes abortion disease and methods of combating it. This publication may be had by writing the Kansas State Agricultural College, Manhattan.

Blackleg is another disease which has caused the cattle industry of Kansas untold loss. The soil of our state is permanently infected with the germs of this disease and no young cattle can be considered safe from it. This disease need no longer cause deaths among our cattle, for we have an absolute preventive in vaccination. No other form of vaccination has proven so effective. The owner has but to take the precaution to vaccinate all his calves to be relieved of all further anxiety concerning it. Credit must be given our own Kansas Experiment Station for developing the newer and more effective vaccine. The Veterinary Department, Kansas State Agricultural College, prepares vaccines for sale, and full printed information will be sent on request.

There are other minor diseases of cattle, among which might be mentioned actinomycosis, or lumpy-jaw; hemorrhagic septicemia; corn-stalk disease, and calf scours, which add to the total of losses.

Swine raising is one of the important industries in Kansas. Hog cholera and parasites have done more to hamper this industry than any other factors. Hog cholera is a contagious disease peculiar to swine. Before a method of controlling this disease was discovered, it frequently happened that epidemics would kill practically all of the hogs over a wide area. It has been estimated that this disease caused a loss in the United States of \$75,000,000 in the year 1914. Kansas stands seventh in the value of hogs produced and her share of the loss would therefore be large. Hog cholera is now being successfully combatted. A country-wide campaign for its eradication is being waged, and it, like Texas fever, must eventually be suppressed. The secretary of the U. S. Department of Agriculture reports a decrease of 50 percent in losses from hog cholera in the last five years. To quote his figures, "the death rate from hog cholera in the United States was 144 per thousand hogs in 1897, 118 in 1914, and only 42 in 1917—the lowest in 35 years." This remarkable reduction in losses was brought about by the dissemination of correct information concerning the disease and the immunization of large numbers of hogs by vaccination. In Kansas the improvement has likewise been very marked. The educational work being conducted within the state by the United States Department of Agriculture, the State Livestock Sanitary Commissioner and the Extension Division of the Agricultural College is beginning to bear fruit. As the owner

learns to provide better sanitary surroundings for his animals, to protect them by better herd management against the introduction of disease, and to immunize them by vaccination, the disease subsides. The records of the serum plant at the Agricultural College, Manhattan, show that the increased sales of serum have been directly proportional to the decrease of the disease.



FIG. 83. Pigs in the first stages of cholera. Note the two pigs remaining in the nest.

The most important matter in connection with the treatment of hog cholera is the early recognition of the disease. Herds that are neglected until all of the animals are sick, are often beyond all hope of recovery, whereas, if promptly treated when the disease first makes its appearance, losses can often be entirely avoided. Fig. 83 shows pigs in the first stages of cholera. If expert advice is sought immediately in such a case, an accurate diagnosis made, and vaccination promptly and properly performed, the herd can be saved. Vaccination against hog cholera is a preventive, not a curative measure. Vaccination would be practically useless in a herd affected with acute

cholera in which practically every hog is sick. However, the success attending the organized efforts for the control of hog cholera leads us confidently to look for the complete eradication of this most destructive disease of swine.

Hemorrhagic septicemia of swine, also called "swine plague," is a disease that has recently received much attention. It accompanies and complicates hog cholera, and the mixed infection produces a condition that is hard to overcome. It is said to occur independently of cholera but it is doubtful whether, as a distinct disease without the virus of hog cholera as the primary invader, it is of great importance.

Necrobacillosis of swine is another complicating disease accompanying cholera. It may exist independently in young pigs as an affection of the mouth and involving the bones of the face. It is then called "Bullnose" or "Snuffles." It may appear in shoters as a necrotic enteritis. Like hemorrhagic septicemia its chief importance is as a complication of cholera.

Intestinal parasites, next to cholera, should receive the attention of the owner. Very young pigs are the most susceptible to invasion of parasites and they die in large numbers from this cause. Losses from parasites are due to the constant use, year after year, of the same old hog lots, which become heavily infested with the eggs of the parasites. Little pigs born into such surroundings swallow large numbers of those eggs and are unable to withstand the heavy invasion. Older hogs are less seriously affected.

Parasites are best overcome by rotation of pastures. Old hog lots should be plowed up and planted to some crop. Sows should be treated with suitable worm medicine before the birth of the pigs. Farrowing should take place in clean quarters and the sow and pigs placed on clean ground and kept away from old hog lots. Proper management would prevent much of the loss which the industry now sustains because of parasites.

Sheep raising has been of relatively slight importance, Kansas standing 27th in the value of sheep produced. Conditions are favorable for the raising of sheep, however, and an effort is being made to develop the industry. The greatest obstacle is the parasitic diseases of sheep. Mange or "scab" was once a widespread affection of sheep that caused great damage, but it has been largely eradicated by systematic dipping under the direction of the U. S. Department of Agriculture. Stomach

worms are now the most important of sheep pests. In combating them the same care should be exercised to provide clean grazing ground as is necessary to avoid parasites in swine. One method of treatment was to dose the sheep with a tablespoonful of gasoline in a half pint of milk. In place of this time-honored method a one percent solution of copper sulphate, one cubic centimeter per pound of body weight, is now being used with good results.

Other diseases and affections of sheep include nodular disease, hemorrhagic septicemia, lip and leg ulceration, foot rot, ticks, and various kinds of tape worms, but they are of less importance than the parasites just described.

The most important contagious diseases of horses are strangles, and shipping fever or influenza. They have always been considered difficult to control, but the results accomplished in the extensive movement of horses for military purposes during the recent war have shown that these diseases, too, will give way before organized attack. The same fundamental principles that are applied in the other contagious diseases were effective here. The quarantining of all infected animals and the thorough cleaning of stock yards, cars, sales stables, and all places where horses were gathered together, have brought about a marked reduction in the losses from these diseases.

Many horses die annually from diseases following the eating of improper feed. Horses seem particularly susceptible to the effects of mouldy feed, and mouldy straw and corn stalks seem to be the most dangerous. The exact cause of death is not known and no effective treatment for this class of affections has been found. The best procedure would seem to be avoid trouble by providing at all times the cleanest and brightest feed it is possible to get.

The health of our livestock has come to be of such importance that it should be as much a part of the calculations of the farmer as the planting and harvesting of crops. The general measures of sanitation and herd management are always in order. Proper location and construction of buildings to provide for drainage, sunshine, and ventilation, and an adequate supply of pure, unpolluted water and wholesome food, are essential for the highest production. Removal of manure and use of disinfectants and white wash are sanitary measures of great value. Proper measures of herd management must be

practiced, through which sick animals are promptly segregated and treated, pastures rotated, and the herd protected from the introduction of diseases, either directly by contact with other animals or indirectly by the owner visiting premises where contagious disease exists, or by streams, wandering dogs, etc. No owner of livestock can afford to neglect the protection given by preventive vaccination in such diseases as blackleg and hog cholera, or the special treatments which are appropriate for the various diseases.

This account may serve to illustrate the foregoing. The writer was conducting a discussion on abortion diseases before a large audience of farmers, when a certain progressive dairyman gave the following testimony of his experience. He said: "I am having no trouble with abortion disease. I had it in my herd at one time, but got rid of it. I invited the best veterinarian in our section to take dinner with me and presented my problem. After viewing it from all aspects we worked out a system for combating the disease. All aborting cows were to be promptly separated and given proper treatment, breeding was to be controlled, and the best possible sanitary measures were inaugurated. My business is conducted on a budget basis. One item in that budget is a certain amount monthly for disinfectants. I not only buy the disinfectant, but I use it religiously. I have made a friend of my veterinarian. He comes whenever expert service is required. He has given sound advice and I have followed it faithfully, and together we have gotten the desired results."

Farmers should be prepared to meet the everyday emergencies that arise. A reliable disinfectant should be kept for treatment of minor injuries and in disinfecting the premises. Compound cresol is among the best for this purpose. One tablespoonful per quart of boiled water makes a useful solution for bathing wounds, while one part to thirty of water is required for disinfecting premises. A pound or two of magnesium sulphate (salts) may be kept on hand for the treatment of constipation, and a trocar is a very useful instrument to relieve bloat in case cattle happen to get into the alfalfa field. A sharp distinction should be drawn between minor affections and emergencies requiring immediate treatment, and the more serious ailments and outbreaks of contagious disease. Many a fine animal suffering from some slight indisposition has been

killed by doping with all of the concoctions suggested by numerous wise neighbors, and often expert advice is sought only when a sick animal is at the point of death. Many herds of swine have been decimated by cholera when accurate diagnosis by experts and prompt vaccination would have checked the disease. It is a wise man who realizes his own limitations in such matters.

Accurate statistics of losses from animal diseases have not been obtained, but it is safe to say that the aggregate annual loss to Kansas amounts to many millions of dollars. To control these losses is a measure of conservation, the need of which will become more apparent as time goes on. As the value of our livestock increases, as our methods of production become more intensive, and as the necessity for conserving the food supply of the nation forces itself upon our attention, we will less complacently tolerate this needless waste. Our sanitarians are constantly improving the methods of combating disease, and information may be had for the asking. Let us unite our efforts to remove the hindrance which disease imposes upon the animal husbandry of our country.

It is estimated that an acre of land covered with sunflowers will lose in a season, through these plants, 392,040 gallons of water, which would cover the ground to a depth of one an one-fifth feet and would be sufficient to irrigate about one acre of alfalfa through the season. In every farming region thousands of acres of weeds are constantly sending the precious ground water into the air throughout the growing season, and this water is often needed by our farm crops.—*The Essentials of Agriculture, Waters.*

The animals of the farm should be regarded as living factories that are continuously converting their feed into products useful to man. A fact of great economic importance is that a large part of the food they consume is of such character that humans cannot directly utilize it themselves. Among the products yielded by the farm animals are not only articles of human diet such as meat, milk and eggs, but also such materials as wool, mohair and hides, which are needed for clothing and other purposes. Another product of greater aggregate money value than any one of these is the work performed by horses and other draft animals. Altogether, the farm animals of the United States yield each year products worth over \$5,000,000,000—a sum nearly as great as the value of all the crops annually harvested on our farms.—*Henry and Morrison, in Feeds and Feeding.*

FARM BARNS.

Believing
proper housing
one of the essential
features of livestock
production, and desiring to
place before the public illustrations of what the farmers of Kansas have accomplished in this line of endeavor, the Kansas State Board of Agriculture, during March, 1919, conducted a barn picture contest, in which cash prizes were offered for the best pictures of the best barns in Kansas. A generous response resulted in the acquirement of an excellent assortment of photographs of especially good barns. Five prizes were awarded, and twelve pictures were given honorable mention. Reproductions of these photographs are shown on the following pages. They stand as monuments, not only to the thrift and prosperity of their owners, but as concrete proof that when intelligent industry and management is applied to the fertile soils of Kansas, bounteous yields, profits and wealth are the result. Furthermore, they indicate the business sagacity and wisdom of our livestock producers in providing suitable housing for their flocks and herds.

As examples of good farm
buildings they point the
way toward the higher
and better development of
the future.

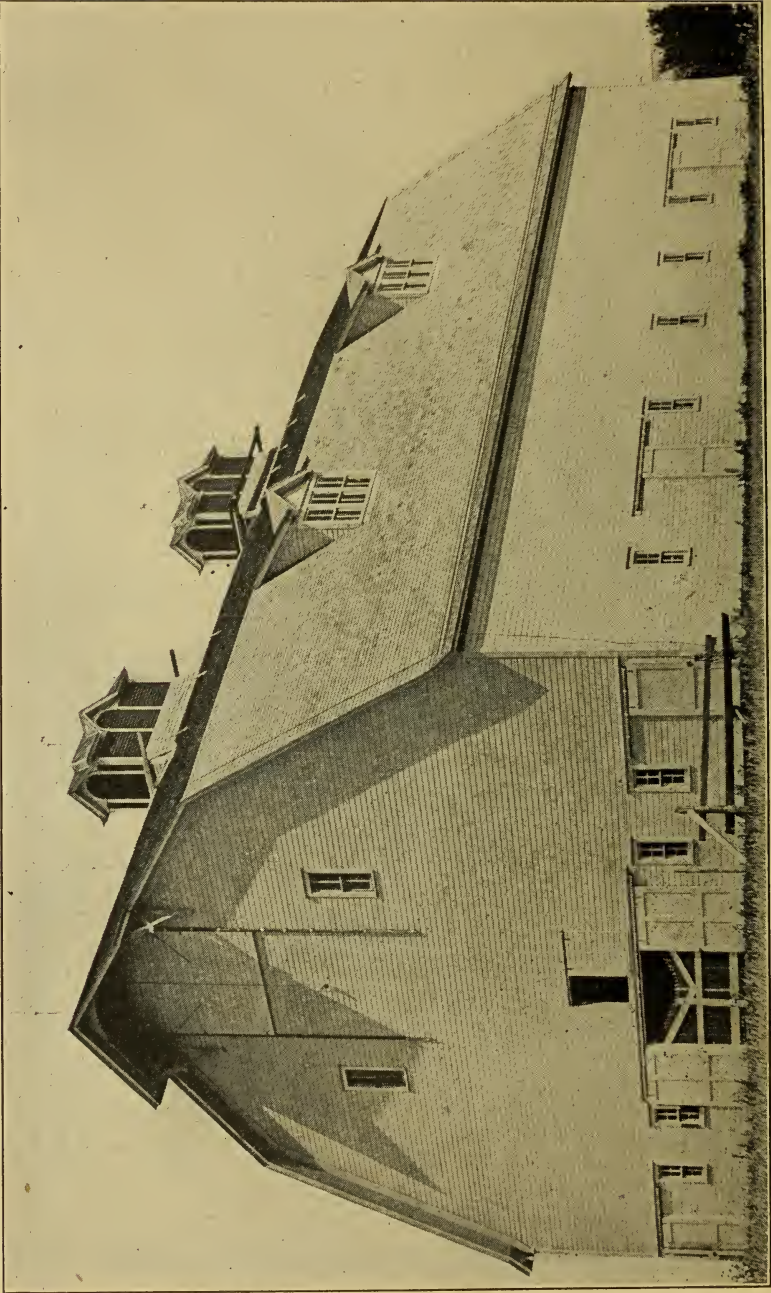


FIG. 84. The Rooks county barn receiving first prize in the picture contest.

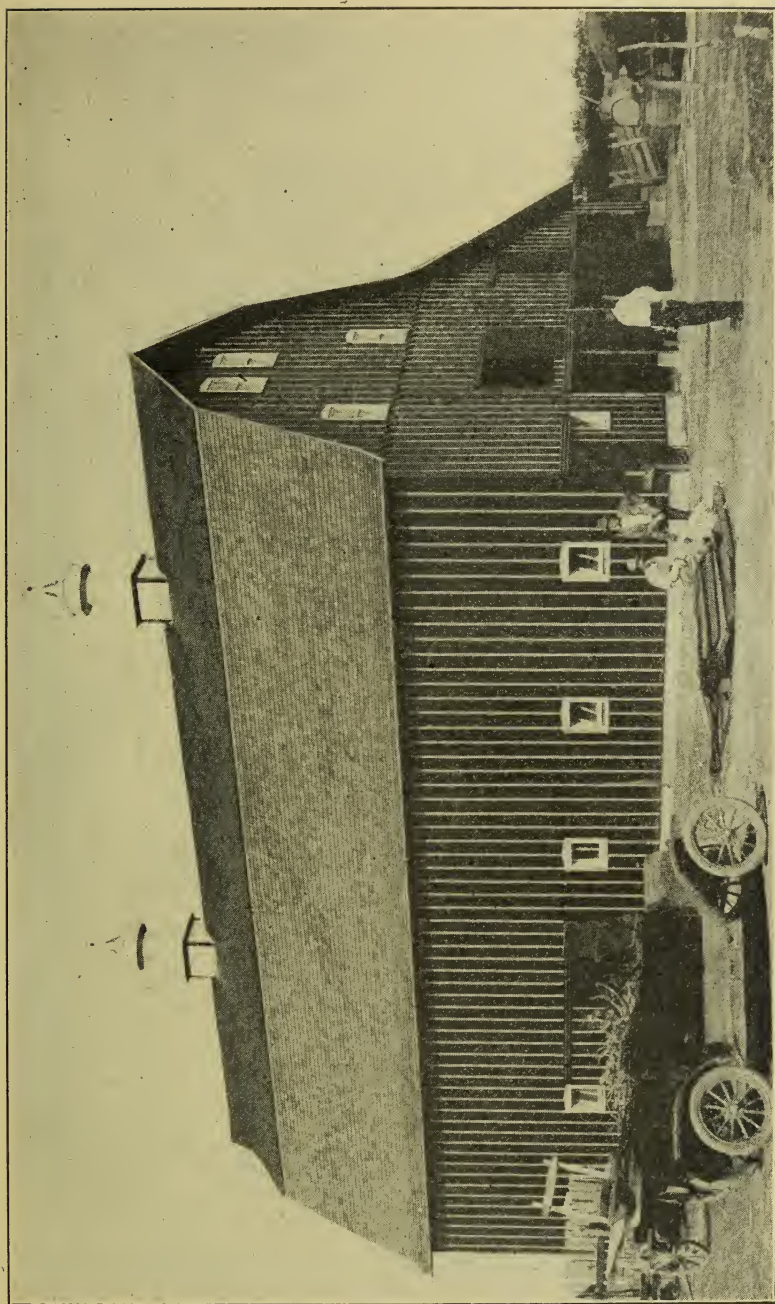


Fig. 85. The Cloud county barn receiving second prize in the picture contest.

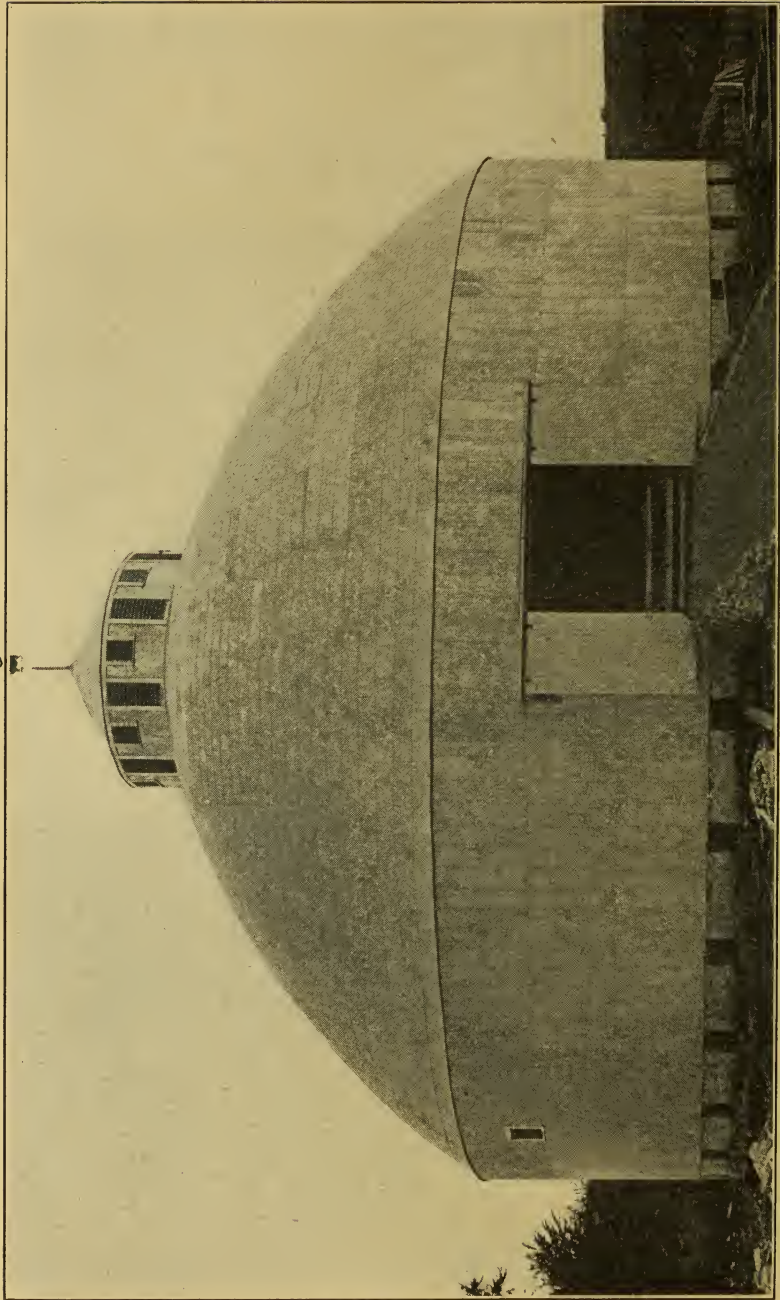


FIG. 86. The Marshall county barn receiving third prize in the picture contest.

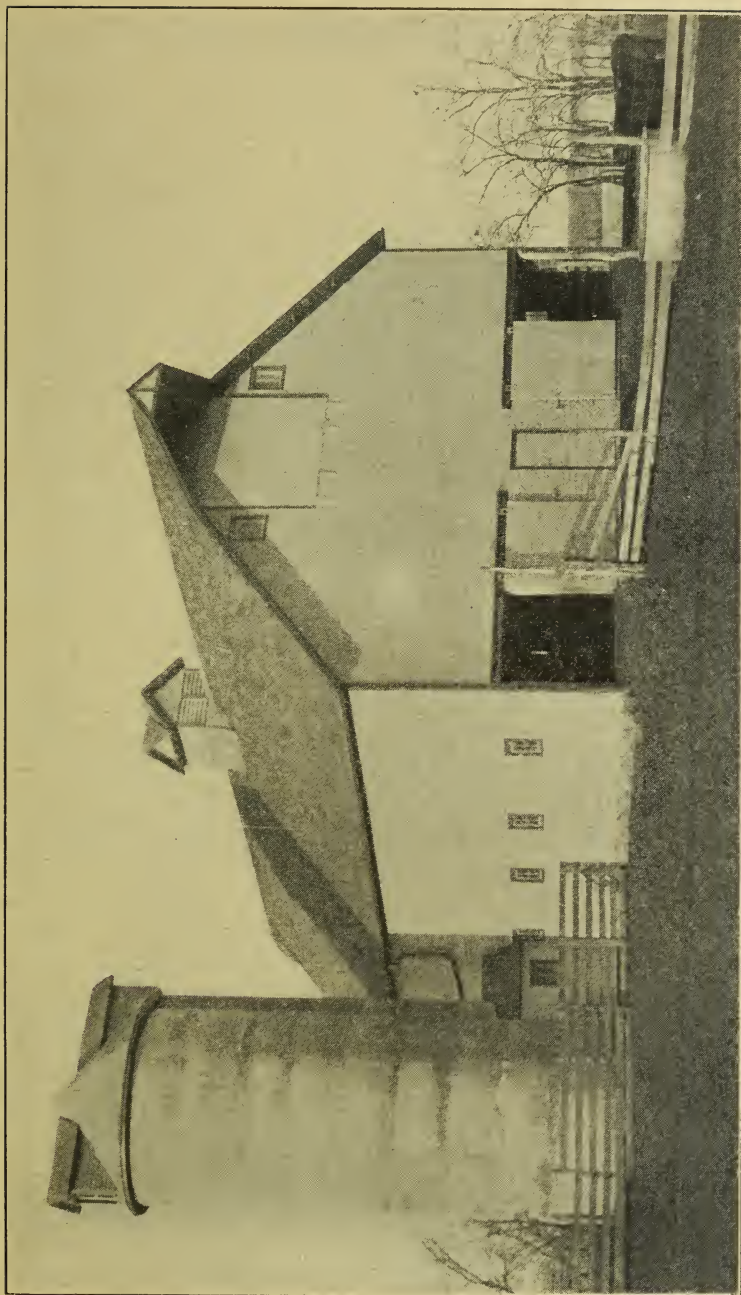


FIG. 87. The Butler county barn receiving fourth prize in the picture contest.

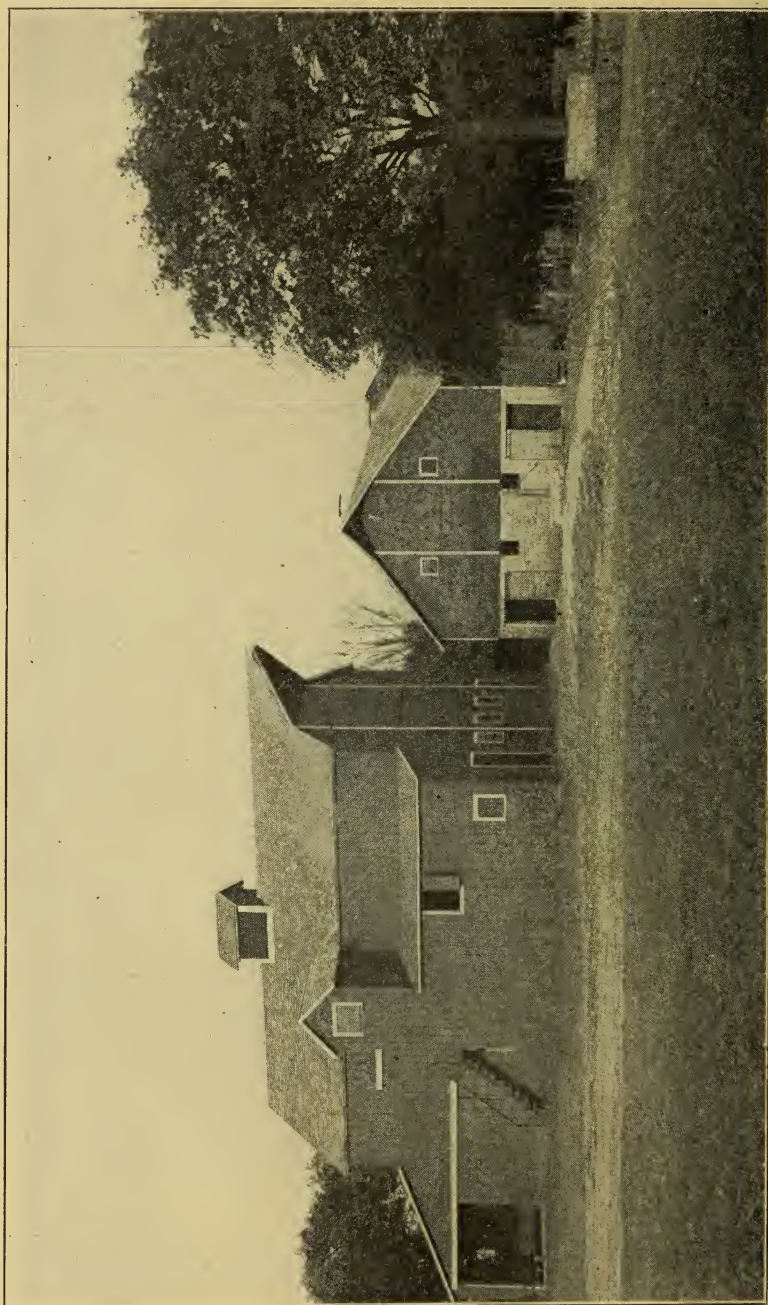


FIG. 88. The Shawnee county barn receiving fifth prize in the picture contest.

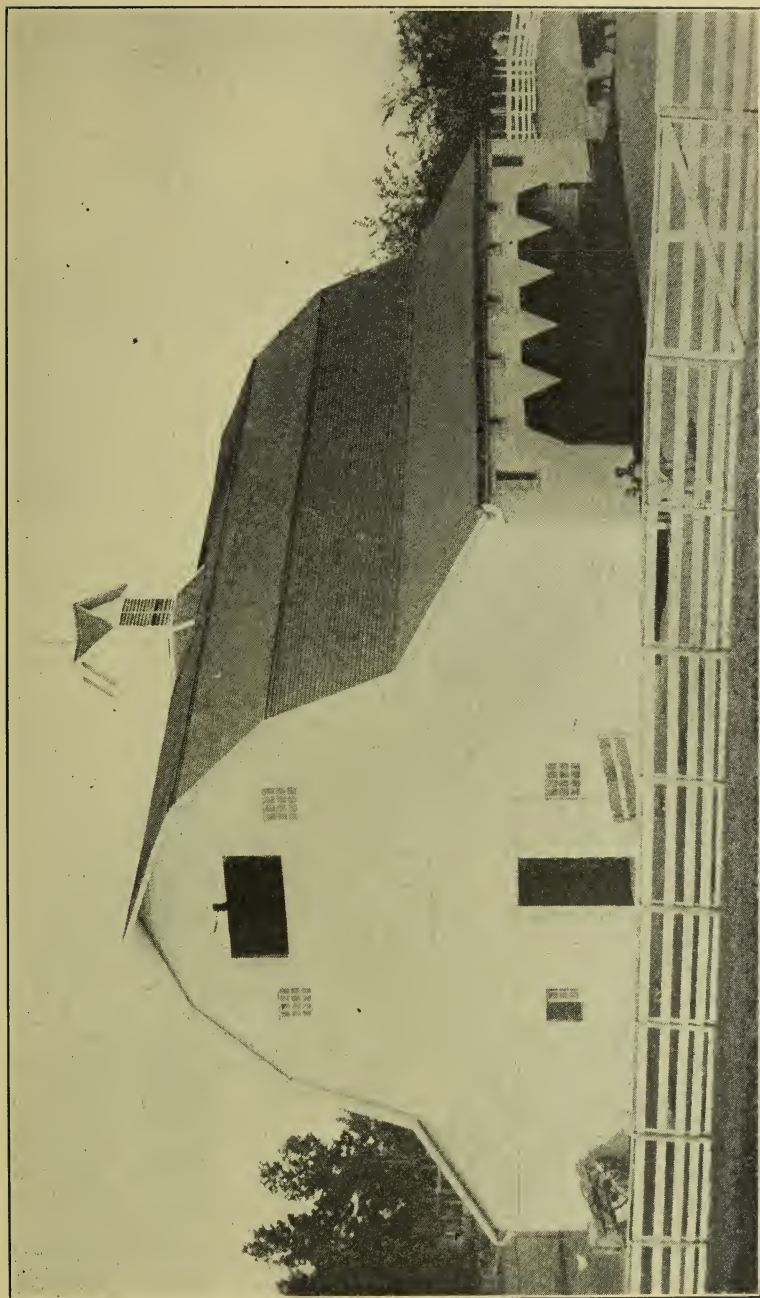


FIG. 89. An excellent Atchison county barn, not in the picture contest.



FIG. 90. Barns receiving honorable mention in the picture contest.



FIG. 91. Barns receiving honorable mention in the picture contest.

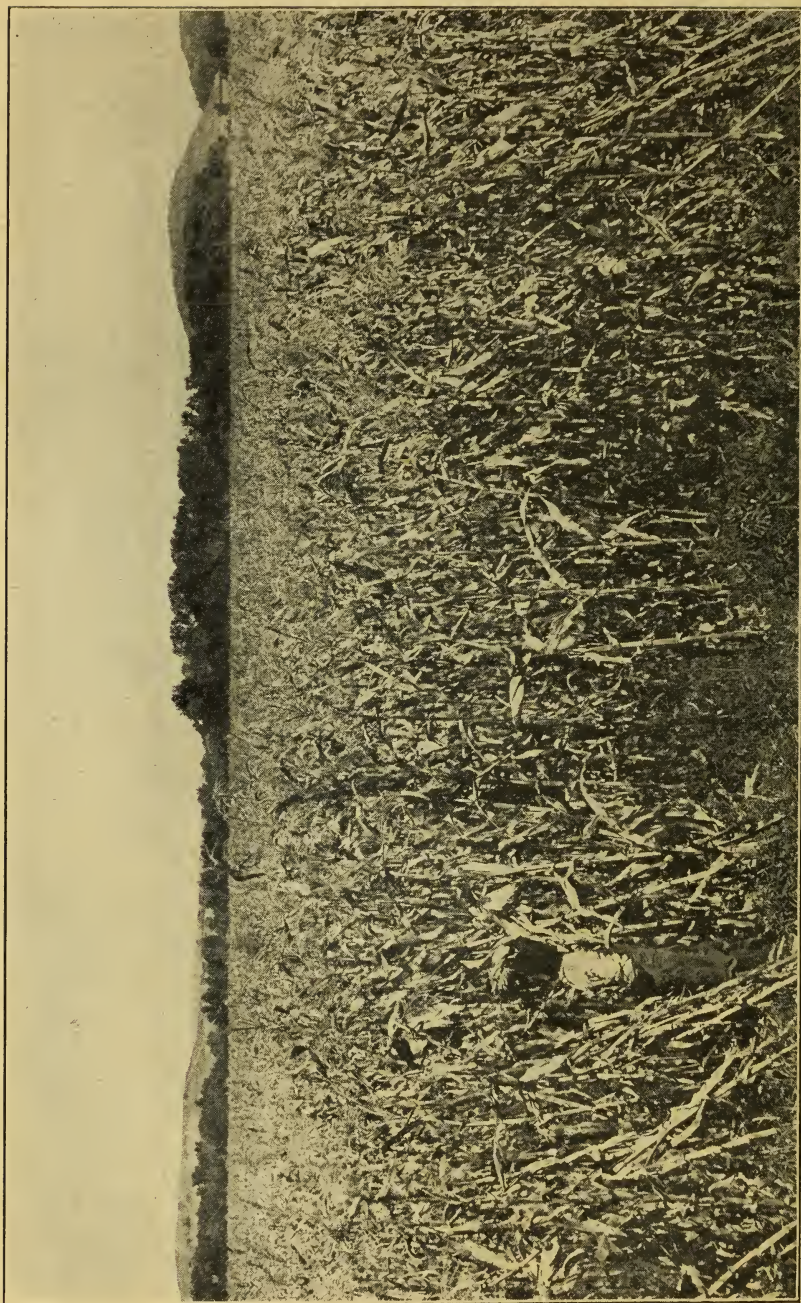


FIG. 92. A Kansas corn field.

CROPS.

CORN PRODUCTION IN KANSAS.

By C. C. CUNNINGHAM, assistant professor of agronomy, Kansas State Agricultural College.

CORN is one of the most important food crops of the world. In quantity produced it ranks second to wheat among cereal crops. The total annual production for the world during the five-year period 1911 to 1915, inclusive, was 3,902,565,000 bushels, of which about 70 percent was grown in the United States of America. The following figures show the relative importance of corn and other cereals from a world-wide standpoint. They are average annual yields for the five-year period 1911 to 1915, inclusive:

	Bushels.
Corn	3,902,565,000
Wheat	3,830,316,000
Oats	4,314,965,000
Rice	1,687,000,000
Rye	1,744,235,000
Barley	1,491,418,000

Under conditions to which it is well adapted corn is more extensively grown than any other cereal. It is preferred to other cereals because of its large productive capacity and the ease with which it can be grown. Corn not only produces large yields of grain, high in feeding value, but it is an excellent forage and silage crop, being particularly adapted for these purposes because of the succulence and character of the plants.

While considerable labor is required to produce corn, it can be so distributed that one man can readily perform all the work required to grow from fifty to two hundred acres, depending on the locality. This accounts to a considerable extent for its popularity. Corn may be called a "one-man" crop, while wheat, and other cereals which compete with corn, require the labor of many men during harvest and threshing times, therefore necessitating a considerable cash expenditure for labor.

In Kansas corn is king regardless of the fact that the state is famous for its crop of wheat, alfalfa, and grain sorghums. During the ten-year period of 1908 to 1917, inclusive, the aver-

age total yield of corn and wheat have been 113,351,000 and 88,117,000 bushels, respectively. Corn, however, has not been holding its own. The following table shows that the production of this great cereal is gradually decreasing in Kansas.

Average annual total production of corn in Kansas for five year periods.

	Bushels.
1898 to 1902.....	162,560,000
1903 to 1907.....	169,958,000
1908 to 1912.....	126,435,000
1913 to 1917.....	100,277,000

The decreased production of corn in Kansas is due in part to lower acre yields and to the substitution of alfalfa and grain sorghums for corn, thus reducing the acreage of the latter crop.

HISTORY.

Corn was not known to the civilized world until America was discovered. The early explorers of these lands found the Indians growing corn in what is now the United States, Mexico, Central America, and the western countries of South America. This cereal was grown and utilized by the Indians long before the discovery of America. Ears of corn were found in the burial mounds of the prehistoric tribes of Ohio, of the Cliff Dwellers in Arizona and New Mexico, and in mounds left by the early inhabitants of Peru. It is believed that corn is a native of America and that it originated somewhere in Mexico.

The Indians produced corn for food, and this cereal was their principal vegetarian diet. The early settlers of America followed the example of the Indians and planted corn to supplement their diet of wild game and other food. Had it not been for corn the early colonists of America would have found it very difficult to obtain suitable supplies of food.

Corn was introduced into Europe after the discovery of America. It was first grown in the countries bordering on the Mediterranean, where it was brought by ships sailing from America. It rapidly spread to adjoining countries, but was not grown extensively until the last century, except in Portugal and Spain. Corn is now grown in all parts of the world to which it is well adapted.

When corn was introduced into Europe it was known as Maize, a word coined from Mahiz, the Indian name for this

crop. It was also called Indian corn to distinguish it from wheat, oats, rye, and barley which in Europe are known as corn.

BOTANICAL CHARACTERS.

The botanical name for corn is *Zea mays*. It belongs to the grass family of plants and is the only member of the genus *Zea*. It has no close relatives either wild or cultivated and it is therefore quite unlike any other cereal as regards its plant characters and habits of growth. The principal difference between corn and other cereals is that the corn bears the flowers on two parts of the plant. The male of staminate flowers are produced by the tassel while the female or pistillate flowers are borne on the cob, which if properly fertilized becomes covered with grain, thus producing an ear of corn.

Most cultivated crops can be traced back to some wild form. There are, however, no known wild types closely related to corn, and the ancestor of this crop has not been definitely de-

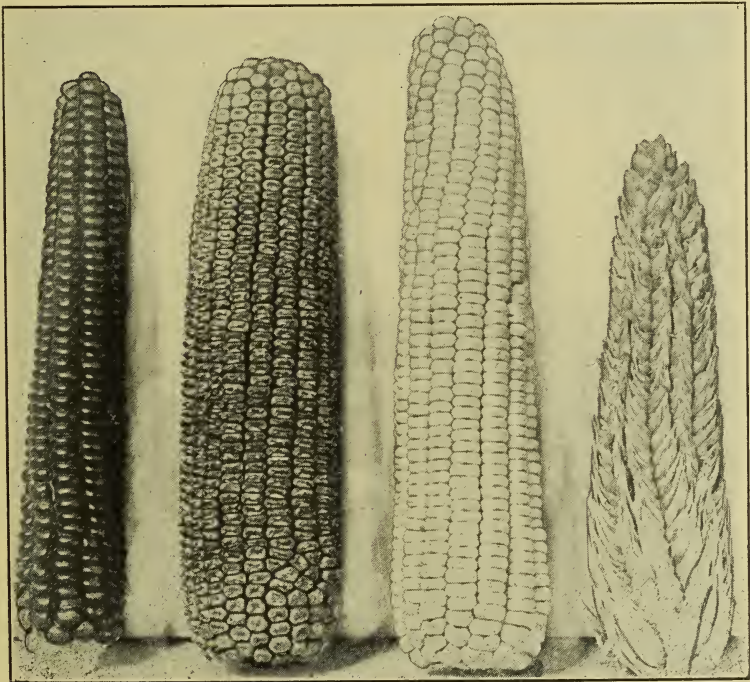


FIG. 93. Types of corn. From left to right—flint corn, dent corn, flour corn, and pod corn.

terminated. Some authorities believe that corn originated from teosinte, a forage plant grown in favored localities in Mexico and Central America.

TYPES OF CORN.

There are six different types of corn or *Zea mays*; namely, dent corn, flint corn, flour corn, sweet corn, popcorn and pod corn.

The dent corn is the type most extensively grown in the world. Practically all of the field corn grown in the eastern three-fourths of Kansas is of this type. A kernel of dent corn is so constructed that a column of white starch extends from one end of the kernel to the other, and the sides of the kernel are composed of the horny starch. As the corn matures, the white starch shrinks considerably, thus causing the outer end of the kernel to contract which results in the formation of a dent or crease in the crown, hence the name, dent corn. Dent corn is characterized by deep, wedge-shaped kernels, large diameter of ears and a large number of rows per ear.

The flint corn differs from the other types in that the ears are comparatively long and slender, with from eight to twelve rows of kernels. The kernels are not dented and are hard and flinty. The plants usually are smaller than those of the dent types. The flint corns are adapted for short growing seasons and are most extensively grown along the northern edge of the United States and in Southern Canada, in limited areas in some of the western states, and in Argentine. Millers prefer flint corn for making cornmeal, it being more desirable for this purpose than the dent types.

Flour corn differs from dent and flint types in that the kernels have no horny starch. The grains are soft and are easily ground or masticated. This variety was grown quite extensively by the Indians because it was easy to grind. Soft corn is of little economic importance. It is grown to some extent in Mexico, Central America, and in portions of South America. The ears of soft corn resemble those of the flint type. The kernels, however, are comparatively large.

Sweet corn is characterized by its sweet taste and by the wrinkled or shriveled appearance of the kernels.

Pop corn is distinguished from the other types by its ability to pop or burst into a white fluffy mass when heated.

Pod corn differs from the other types in that each kernel is

enclosed in a little husk or pod. The variety is of no economic importance and is grown as a curiosity.

USES OF CORN.

Corn is utilized in many ways. It is of primary importance as a food for man and feed for livestock. This cereal is included in man's dietary in the form of green corn served as roasting ears or cut from the cob; corn meal served as mush, corn bread, or corn cakes; hominy, starch in various puddings, breakfast cereal, and pop corn.

As a feed for livestock, corn is utilized more than any other grain. It is relished by stock to a greater degree than most other cereals. Corn is rich in starch and oil, but rather low in protein. For growing animals or for milk cows, it should be properly combined with other feeds high in protein. It is unexcelled by other feeds for fattening all forms of livestock. The primary use of corn is for the growing of the lard type of hogs. The production of this cereal and hogs are usually closely related. Charts showing respectively the principal corn-producing and hog-producing areas of the United States would be very nearly identical. Corn stover, if cut at the proper time and well preserved, makes excellent forage. When utilized for silage, corn is equal or superior to most other crops grown for this purpose.

Corn is extensively used in the manufacture of starch. Corn oil, which is a by-product of the starch factory is now used for a number of purposes. A substitute for rubber is made from corn oil. Glucose is also produced from corn and its by-products. Alcohol and certain liquors are made from this cereal. The pith of the corn stalk is used to some extent in the making of paper and for packing on battle ships. The husks of corn are used in upholstering and in the making of mattresses and door mats. Many other uses of the corn plants will undoubtedly be developed.

PRODUCTION AND DISTRIBUTION.

Corn is grown on every continent of the globe. The United States is the principal corn-growing country of the world and produces annually about 70 percent of the total yield. The principal corn-producing countries of the world and the average annual production in bushels are as follows:

WORLD'S CORN CROP.

(Five years average, 1912-1916.)

Country.	Number of bushels.
North America—	
United States	2,722,957,666
Canada	14,580,333
Mexico	120,192,400
Total	2,837,698,333
South America—	
Argentina	213,778,166
Uruguay	6,679,666
Chile	1,562,000
Total	222,009,666
Europe—	
Austria-Hungary	213,649,000
Roumania	103,651,800
Italy	101,512,166
Russia	73,438,500
Bulgaria	31,633,000
Spain	26,833,666
France	20,261,000
Total	510,466,666
Africa	93,195,166
Philippine Islands	10,751,666
Australia	9,334,666
Asia	*83,948,888
Grand total	3,758,513,166

* Average of three years.

The only country that will likely be an important competitor of the United States in the production of corn is Argentina. This country is well adapted for corn production, and large areas of land capable of growing this crop have not been developed. Only four countries export corn, namely: Argentina, United States, Roumania and Russia.

The largest continuous area in the world adapted to the production of corn is found in the United States. This area includes the six first-named states given below and adjacent parts of other states, and is known as the "corn belt." This area produces nearly 50 percent of the world's corn crop.

AVERAGE ANNUAL PRODUCTION OF THE LEADING CORN PRODUCING STATES OF THE UNITED STATES.

Six-year averages, 1912-1917:

	Bushels.
Iowa	372,511,000
Illinois	351,284,000
Indiana	188,021,000
Nebraska	187,586,000

AVERAGE ANNUAL PRODUCTION, ETC. (concluded) —

Missouri	184,586,000
Ohio	147,138,000
Texas	136,179,000
Kansas	112,601,000
Kentucky	99,761,000
Oklahoma	67,117,000

Figs. 94 and 95 show the distribution of corn in the United States and Kansas, respectively.

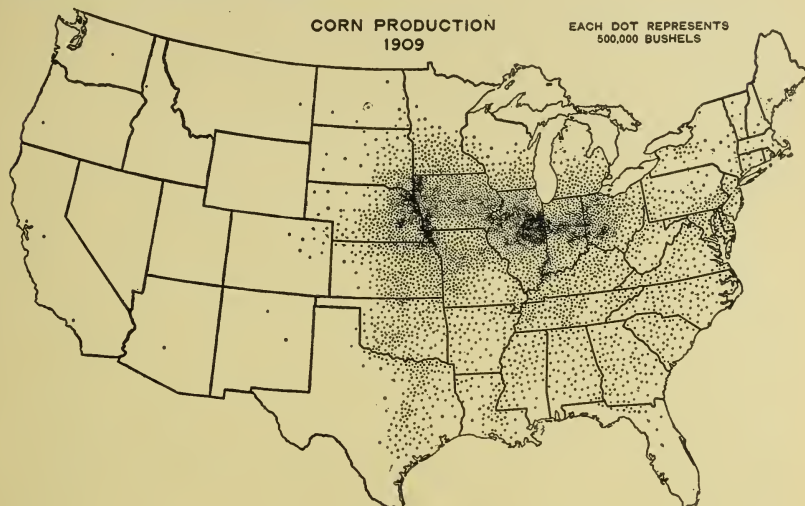


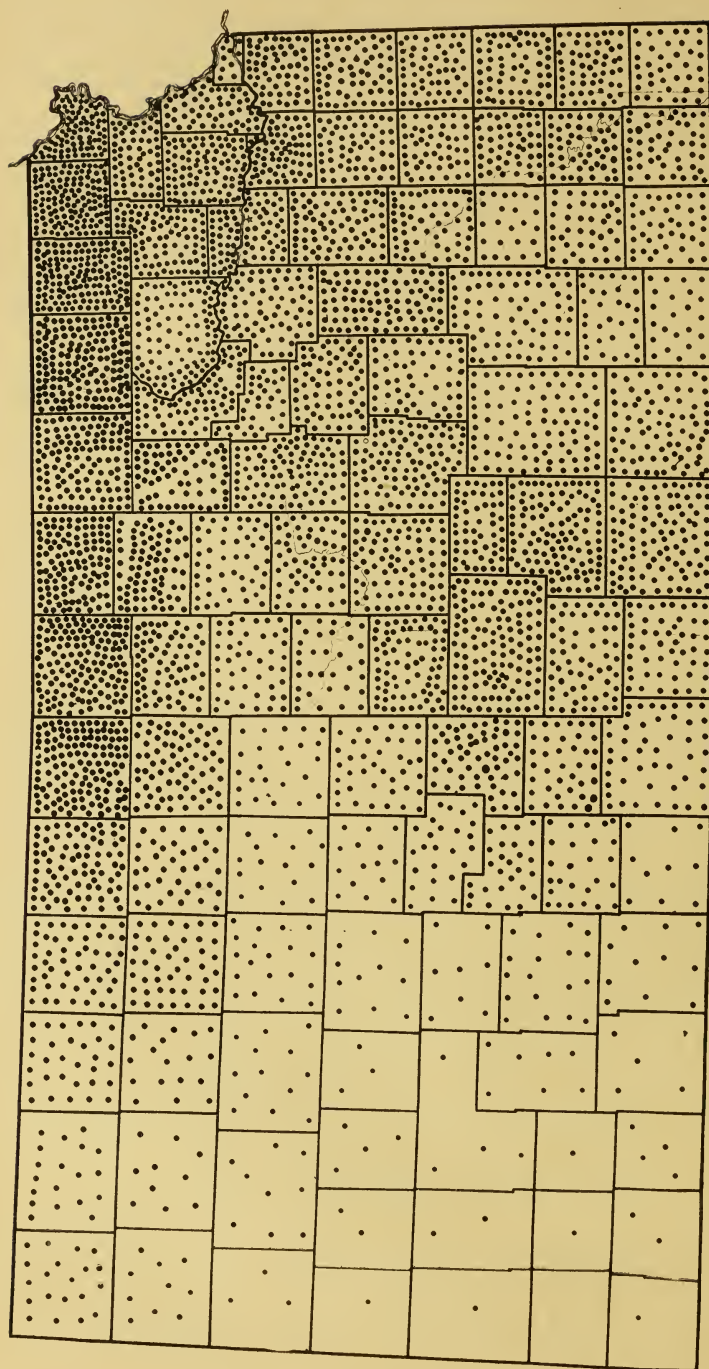
FIG. 94. The distribution of corn in the United States.
(Courtesy U. S. Department of Agriculture.)

ADAPTATION.

Corn is rather exacting as to its climatic and soil requirements. Of the two factors, climate is the more important. Corn requires a long growing season, with an abundance of rain and sunshine. It is easily damaged by heat and drouth and by late or early frost.

The moisture requirement of corn is especially heavy at the time the plants are tasseling, silking, and developing the ears, which is usually during July and August through the corn-belt states of this country. An abundant precipitation during this time, especially in July, is necessary for the production of heavy yields of corn.

Corn requires a better soil for its best growth than do other cereals. It makes its maximum development on deep, fertile, friable soils. On poor land it is usually an unprofitable crop.



AVERAGE ANNUAL PRODUCTION OF CORN IN KANSAS, 1906 - 1915 INCLUSIVE.
EACH DOT REPRESENTS 25,000 BUSHELS.

Fig. 95. A dot map showing the distribution of corn in Kansas.

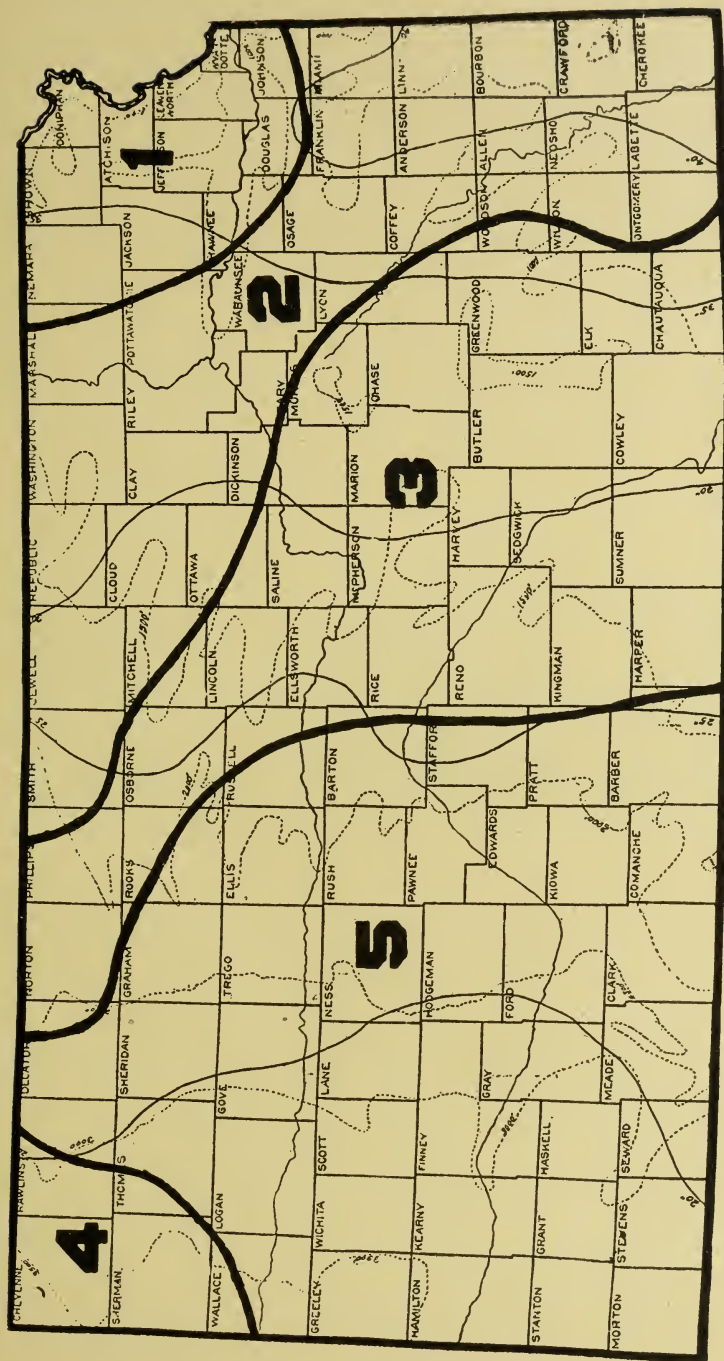


FIG. 96. Map showing the relative adaptability of corn and grain sorghums in Kansas.

Unfortunately all parts of Kansas are not adapted to the production of corn. In Fig. 95, showing the distribution of corn in Kansas, it will be noticed that the production is heaviest in the northeastern part of the state and that it gradually decreases to the south and west. In those sections of the state where midsummer drouth, low precipitation, hot winds, or poor soils make corn production uncertain, other crops, such as the grain sorghums (kafir, milo, feterita, etc.), can frequently be substituted to good advantage.

AREAS IN KANSAS TO WHICH CORN IS ADAPTED.

The Agronomy Department, in its coöperative experimental work with farmers in all parts of the state, has made a study of the comparative value of corn and the grain sorghums. The

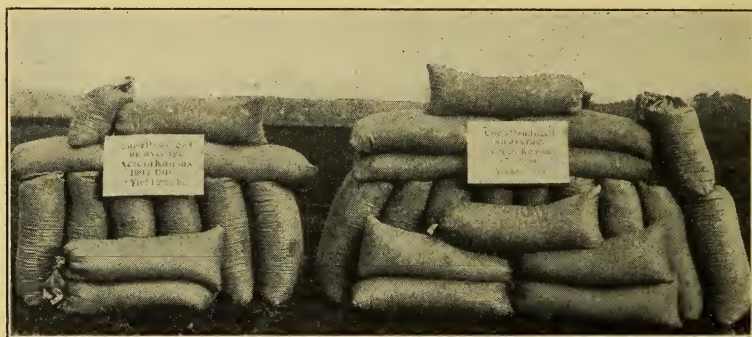


FIG. 97. The average acre-yield of corn for the six-year period 1875 to 1880, compared with the average acre-yield for the six-year period 1905 to 1910, inclusive.

map (Fig. 96) shows the state divided into districts based upon the relative value of corn and kafir or other grain sorghums, as shown by these investigations.

In the northeastern part of the state (district 1 on the map) corn is nearly every year a more profitable grain crop than kafir or other sorghums. The soils of this area are well adapted to corn and the rainfall is sufficient to mature large crops of grain.

In district 2 corn is the better crop on the rich bottom land and on the deeper upland soils, but on poorer and more shallow uplands kafir usually gives better yields.

In district 3 kafir outyields corn as a rule and is more profitable except on the best land. Even on the latter kafir is

usually more profitable if it can be utilized as feed, as the total yield is usually greater.

In district 4 milo and feterita, which are also sorghum crops, but earlier than kafir, yield about the same as corn, on the average. The elevation here is great, which makes the seasons too short for kafir. Corn can be planted somewhat earlier than sorghums, and for that reason has a longer growing season.

In district 5 it is very seldom that corn will produce so large yields as the grain sorghums, and it is almost always a less profitable crop, even when the greater cost of harvesting the grain sorghums and the smaller value to the bushel is considered.

DECREASING YIELDS OF CORN.

The acre yield of corn in Kansas has been steadily decreasing. This is shown by the average yield for corn for five-year periods since 1865.

AVERAGE YIELD OF CORN IN BUSHELS PER ACRE FOR FIVE-YEAR PERIODS.

1865-1869.....	36.0
1870-1874.....	31.2
1875-1879.....	41.2
1880-1884.....	32.9
1885-1889.....	26.7
1890-1894.....	18.6
1895-1899.....	23.1
1900-1904.....	19.9
1905-1909.....	23.8
1910-1914.....	14.6

While the yield fluctuates with the varying seasons, nevertheless the decrease has been a steady one. Similar figures for any county in the best corn-producing sections of Kansas would show the same results.

The decrease in the yield of corn is due to several factors. The loss of the fertile surface soil by erosion, and the depletion of the fertility and the humus content of the soil has greatly reduced the producing capacity of much of the corn land of the state. Injury to the corn from insects and plant diseases due to lack of proper methods of tillage and crop rotation is also a cause of lower yields. Farm practices that prevent or reduce to a minimum soil erosion; that build up, or at least maintain the fertility and organic content of the soil; that control insect pests and plant diseases must necessarily be employed in order to avoid a further decrease in the yield of corn.

HOW TO PREVENT EROSION.

In some parts of Kansas, especially on the rolling soils in the eastern part of the state, a large quantity of plant food has been lost through erosion. On many of these soils the loss by this means has been much more rapid than the gain from the agents of weathering. Since the most fertile part of the soil is the upper few inches, it is necessary to keep this part in place.

Since erosion is caused by running water, any practice which increases the water-holding power of the soil will decrease erosion. Deep plowing, adding organic matter, and working the ground at right angles to the slope of the land are all effective methods of checking the wash, and therefore assist in preventing soil erosion. Steep slopes in a field should be kept in grass or hay instead of cultivated crops. The grass furnishes a protection to the surface of the ground while the roots bind the soil particles together and hold them in place. If it is necessary to plow or list sloping fields, they should be worked parallel to the slope of the land instead of up and down hill. Fields worked on the contour hold water for a longer time after a rain, which in turn gives the soil greater opportunity to absorb it, thus decreasing the quantity draining from the field as well as decreasing the rate of flow of the run-off water. When the furrow is up and down the slope it forms a natural drainage channel which soon becomes deeper and thus carries away large quantities of the most fertile part of the soil. Practices of this kind are responsible for the rapid exhaustion of the producing power of many soils of the state.

ORGANIC MATTER.

Organic matter decays rapidly in a cultivated soil. The more frequently the soil is plowed and the more intensely it is cultivated, the more rapid the loss of this material. Soils cropped continuously to corn, kafir, or other cultivated crops are usually depleted in organic matter more rapidly than soils cropped to small grain, while soil seeded down to alfalfa or grass crops may increase rather than decrease in organic matter.

VALUE OF ORGANIC MATTER.

It is important to keep soil well supplied with organic matter because it holds practically all of the nitrogen in the soil, consequently as the supply of organic matter decreases the nitro-

gen decreases. Organic matter is also important as an aid in holding moisture and keeping the soil in good tilth. A soil depleted of its organic matter runs together and crusts badly after rains. It bakes if worked a little wet, and plows up lumpy if plowed dry. It also absorbs water slowly and will hold less water than a similar soil well supplied with organic matter. Organic matter is also the principal food of the bacteria that make available plant food for plants. In brief, organic matter is so important that it may be safely said that practically all of the so-called worn-out land in Kansas is unproductive, not because it is deficient in plant food, but because with the low supply of organic matter present there is not sufficient plant food made available to give profitable yields. When this land is again supplied with organic matter these soils will become almost, if not quite, as productive as they were originally. Any attempt to permanently increase the fertility of such soils without first supplying organic matter to them will be financially unsuccessful.

LOSS OF ORGANIC MATTER FROM CULTIVATED SOILS.

The fact that the soil has been rapidly depleted in organic matter when it has been continuously under cultivation is clearly shown by the following data comparing the carbon con-

TABLE I.—*Decrease in Nitrogen and Organic Matter in Kansas Soils.**

COUNTY.	Soil, type.	Cropping system.	Pounds per acre.	
			Nitro- gen.	Organic matter.
Riley.....	Oswego silt loam.....	Native meadow.....	4,980	122,400
		Cultivated to wheat and corn for 30 years.....	3,700	85,600
Brown.....	Marshall silt loam.....	Native meadow.....	5,480	139,200
		Average of six cultivated soils. (Rotation of corn, oats, and wheat.)	4,240	106,800
Russell.....	Sedgwick clay loam.....	Native buffalo pasture.....	4,260	98,400
		Thirty years in wheat.....	2,960	64,400
Allen.....	Oswego fine sandy loam.....	Native meadow.....	3,760	83,600
		Cultivated to corn and broom corn.	2,440	46,400
Butler.....	Sedgwick clay loam.....	Native pasture.....	4,280	106,400
		Cultivated to corn and forage crops.	2,800	66,800
Greenwood.....	Osage silty clay loam.....	Native meadow.....	4,600	113,600
		Corn, 30 years.....	3,400	73,200
Greenwood.....	Summit silty clay loam.....	Catalpa grove.....	5,200	126,000
		Average of five cultivated soils...	3,400	76,400
Reno.....	Reno loam.....	Native pasture.....	3,400	74,800
		Average of three cultivated soils...	1,920	36,400

* SWANSON, C. O. The loss of nitrogen and organic matter in cultivated Kansas soils and the effect of this loss on the crop-producing power of the soil. Jour. of Indus. and Engin. Chem. 7:529-532. 1915.

tent of some old cultivated soils with the carbon content of the same soil in an uncultivated or virgin condition. Carbon is the chief constituent of organic matter, and the organic matter content of a soil is usually expressed as carbon in a chemical analysis.

Table I gives the difference in carbon and nitrogen content of soils left in native meadow and pasture as compared with the same soils under cultivation.

It will be seen from this table that soils which have been cultivated 30 years have lost from 25 to 30 percent of their nitrogen and from 30 to 35 percent of their organic matter. It will also be noted that the decrease in both nitrogen and organic matter has been more rapid when cultivated crops have been grown continuously than when a rotation has been followed.

ROTATION THAT WILL MAINTAIN ORGANIC MATTER.

It is evident that soils under cultivation are gradually depleted in organic matter and that the methods of farming commonly practiced are neither maintaining the content of organic matter nor the productivity of the soil. It is therefore imperative that greater effort be made to use every possible source of supply of organic matter. One of the first essentials to the maintenance of organic matter is the adoption of a cropping system that includes a leguminous crop. However, even a small grain crop alternated with corn will maintain the organic matter much better than corn grown continuously; but where leguminous crops like alfalfa, sweet clover, red clover, or cowpeas are introduced into the rotation, the supply of organic matter is still better maintained. This point is well shown in Tables II and III, giving the results of rotation experiments at the Missouri and Kansas Agricultural Experiment Stations.

TABLE II.—*Experiments in Crop Rotation, Missouri Agricultural Experiment Station.*

Rotation.	Yield of corn, 1918.
Corn continuously, 17 years.....	11.8 bushels per acre
Corn, wheat, clover, 17 years.....	50.7 bushels per acre
Corn, oats, wheat, clover, timothy, 17 years.....	54.2 bushels per acre
Corn, wheat, clover (manured).....	77.6 bushels per acre

It will be seen in the results from the Missouri station that where corn has been grown continuously for 17 years the yield has been reduced to 11.8 bushels per acre. Where a rotation of corn, wheat, and clover has been practiced the yield for the

same year was 50.7 bushels per acre, and where barnyard manure was added in the same rotation the yield reached 77.6 bushels per acre.

TABLE III.—*Crop Rotation, Kansas Agricultural Experiment Station.*

Rotation.	Yield of corn, 1917.
Corn continuously, 8 years.....	17.6 bushels per acre
Corn, corn, wheat, 8 years.....	22.7 bushels per acre
Corn, cowpeas, wheat, 8 years.....	32.8 bushels per acre
Corn, corn, wheat, and cowpeas (a), 8 years.....	34.5 bushels per acre
Corn, wheat, and alfalfa (b), 8 years.....	44.9 bushels per acre

(a) Cowpeas sown after wheat as a green manure crop.

(b) Alfalfa four years, corn two years, wheat one year and followed by corn.

At the Kansas station the work has been of much shorter duration than similar work at the Missouri station. Corn has been grown continuously for only eight years, yet in this period of time the effect of continuous cropping to corn in reducing the yield has been marked. The yield in 1917 on upland soil where corn had been cropped continuously for eight years was 17.6 bushels per acre. In a simple rotation of two crops of corn and one of wheat the yield of corn was 22.7 bushels. In the same rotation when cowpeas were sown after harvesting the wheat and plowed under in the fall before frost, the yield was increased to 34.5 bushels per acre. In a rotation consisting of corn, cowpeas, and wheat where cowpeas were cut for hay, the yield of corn was 32.8 bushels per acre. On a field that grew alfalfa four years, corn two years, wheat one year, and then corn again in 1917, the yield was 44.9 bushels per acre. The results secured from rotating crops have been striking. The important benefits derived from the rotation have undoubtedly been the control of insects and diseases and the increase in the supply of organic matter, which has aided in the liberation of plant food from the unavailable store in the soil.

ROTATIONS FOR CORN.

Where red clover can be successfully grown it is an excellent crop to use in a rotation with corn. Red clover is adapted for growing in sections 1 and 2 (Fig. 99), with the exception of the prairie and more shallow soils in the western part of the areas and the shallow soils in the southern half of section 2. Clover also succeeds fairly well on the better types of soil in section 3. A rotation containing corn, wheat or oats, or both, and clover,

is perhaps the most practical one for the average farm in sections 1 and 2. The rotation can be varied to meet the needs of any particular farm. Corn may be grown one or two, or perhaps in a few cases, three years. It may be followed by oats or wheat, and clover may be seeded in the small grain in the spring. Under normal conditions a good stand of clover will usually be obtained. The first crop of clover is usually cut for hay and the second crop cut for hay or seed, or plowed under for green manure. The best results in maintaining soil fertility are obtained when the second crop is utilized for green manuring.



FIG. 98. Plowing under sweet clover for green manure.

In most parts of Kansas, however, Red clover cannot be grown successfully because of drouth during the summer. Sweet clover, which is hardier and more drouth resistant than Red clover, may be substituted for this crop for rotation purposes along the western border of the sections adapted to Red clover and for a considerable distance further west.

ALFALFA AS A ROTATION CROP WITH CORN.

Alfalfa is an excellent crop to grow in rotation with corn from the standpoint of furnishing nitrogen and keeping the soil in good physical condition. There are, however, several disadvantages in using alfalfa in a rotation. In the first place, the rotation necessarily must be a long one. It is not advisable

to use alfalfa in a rotation of less than twelve years, and often a rotation of sixteen or twenty-four years is more practical. The cost of seeding alfalfa is considerable, the failure to obtain a good stand is frequent, thus interfering with the rotation, and most farmers, after they have a good stand established, will not plow it up so long as the field is in thrifty condition.

Alfalfa is well adapted to sections 3, 4 and 5, to the bottom lands of sections 6 and 7, and to parts of sections 1 and 2 (see Fig. 99). Alfalfa thrives well upon the best corn soils in these sections, and is, therefore, the logical crop to grow in rotation with corn. It is seldom advisable to break up alfalfa within five years after seeding, but it is doubtful if it should remain longer than from eight to twelve years. In central and western Kansas, and in dry seasons in eastern Kansas, considerable difficulty is experienced in growing corn on alfalfa sod. The corn makes a heavy growth, especially in the early part of the season, and produces an abundance of foliage, but does not produce grain. This heavy growth of foliage is probably caused by an abundance of available nitrogen left in the soil by the alfalfa. Because of the heavy development of foliage, a comparatively large amount of moisture is required to maintain and properly mature the crop. Unless the supply is abundant the corn will suffer before it reaches maturity. Vegetation of any kind that makes a quick, rapid growth is tender and succulent and very susceptible to heat and drouth. This is especially the case with corn that grows rapidly during the early stages of growth.

Alfalfa also leaves the ground very dry. It reduces the moisture content of the soil to a point below that to which it is ordinarily reduced by corn or other cereal crops. This fact, together with the conditions mentioned above, makes alfalfa sod undesirable for corn in the less humid portions of the state. Where corn cannot be grown to advantage after alfalfa, kafir, sweet sorghum, or similar drouth-resistant crops are the more profitable ones to grow in the first year or two. Corn can then follow these crops, While the effect of alfalfa may not be favorable to the crops immediately succeeding it, the ultimate effect of the nitrogen stored in the soil will prove beneficial.

Under normal conditions in eastern Kansas, and during years of heavy rainfall in central Kansas, large yields of corn are obtained on alfalfa sod. Under these conditions it is the most satisfactory crop to grow after alfalfa.

COWPEAS AS A CROP TO PRECEDE CORN.

In sections 2 and 3, in the southern part of sections 1 and 4, and in favorable seasons in section 5 (Fig. 99), cowpeas may be used to good advantage in a rotation as a crop to plow under to precede corn. A rotation in which cowpeas is used in this way is well adapted to those farms on which it is not practical to include hay or pasture grasses or other legumes in the cropping system, or on which such crops cannot be grown frequently enough or manure applied often enough to maintain the nitrogen and organic-matter supply of the soil. Cowpeas can also be used in this way on wheat or oat ground which has been seeded to clover but upon which the clover has failed to make a satisfactory stand. The cowpeas can be sown after oats or wheat is harvested, and in the average season will make a good growth of green material to plow under before frost. They should be planted as soon as possible after the small grain is harvested. As a rule it will not pay to plant cowpeas for green manure after the 20th of July, except in the southern part of the state. An early variety, such as New Era, Groit or Whippoorwill, should be used.

"CORN SICK" LAND.

Land that grows corn continuously will become "corn sick" in the course of time. That is, it will become so badly infested with insect pests and plant diseases injurious to corn that profitable yields cannot be obtained, because of the detrimental effect of these enemies. A proper rotation, combined with good tillage methods, is quite effective in combating insect pests and plant diseases of corn.

BARNYARD MANURE FOR CORN. •

Barnyard manure judiciously applied is an excellent source of plant food for corn. It should be applied in light applications, five to ten tons per acre, where corn is subject to drouth and there is danger of "firing." It will be noted that in Table II, giving results of rotation tests conducted by the Missouri Station, barnyard manure increased the yield of corn about 20 bushels per acre over land similarly treated, but not manured. Similar results have been secured on many farms throughout Kansas.

COMMERCIAL FERTILIZERS FOR CORN.

It seldom pays to use commercial fertilizers for corn, even in the section of the state where fertilizers give their best results on wheat. Corn grows through the warmest period of the year, when plant food is liberated the most rapidly, and consequently has the best opportunity to secure an abundance of plant food from the soil itself. It is also a crop that should make a slow growth in the early period of its development. One of the advantages of listing corn is the slow development that listed corn makes during its early stage of growth, which results in a smaller stalk and larger root development in proportion to the leaf area. Commercial fertilizer applied before or at the time of planting corn produces a more rapid early growth of the plant and makes it less able to withstand periods of dry weather to which it is likely to be subjected later in the season. Thus in dry, unfavorable seasons commercial fertilizer may actually reduce the yield of grain. In seasons in which corn does not suffer from drouth fertilizers conveying about two percent of ammonia and a maximum percent of phosphoric acid, can be used to advantage on corn in eastern Kansas, especially those soils derived from shale or sandstone.

THE KIND OF CORN TO GROW.

Corn varies more in type, size, and characteristics than any other cereal, except sorghum. There are several hundred varieties of corn. The principal characters that differ in corn are the color of the grain, the type of ears and grain, the size and maturing of the variety, and the growing habits of the plants. The color of the grain may be white, yellow, red, purple, or calico, or a combination of these various colors. The white and yellow colors are the predominating ones. Varieties of corn vary in size from very early maturing ones, which reach a height of about three feet, to varieties which grow from twenty to twenty-five feet tall and require 200 days in which to ripen.

The best variety to grow in any given locality is governed by a number of factors, such as the length of the growing season, the fertility of the soil, the average annual precipitation, the climate, and the purpose for which the corn is grown.

The precipitation, elevation, and soil conditions vary so much in different sections of Kansas that the varieties of corn which grow best in one locality are frequently very poorly

adapted to others. In eastern Kansas the annual rainfall averages thirty-five inches or more. In this area, medium-sized varieties usually produce the largest yields. In western Kansas, the annual rainfall is less than twenty inches, and the elevation is from 1,500 to 2,500 feet above that of eastern Kansas. If the large, late-maturing varieties of eastern Kansas are grown in this area they will invariably be injured by drouth, hot winds, or early frost. They may produce fodder, but they will not produce grain. On the other hand, if the small, early-maturing varieties usually grown in western Kansas are grown in eastern Kansas, they will ripen so early that

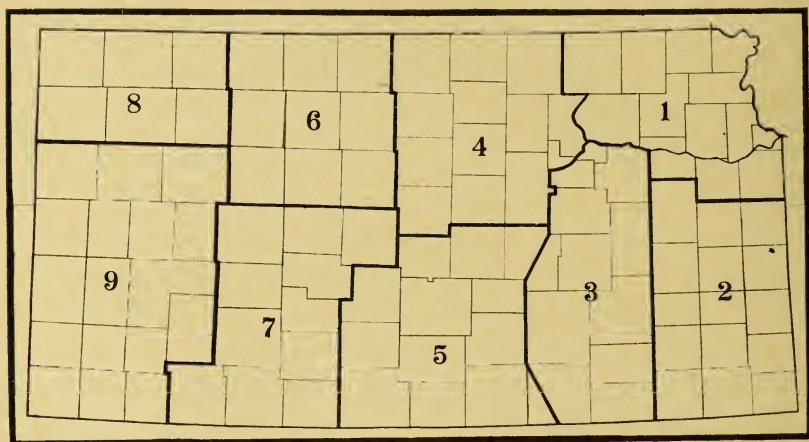


FIG. 99. Corn-growing sections of Kansas.

they will not derive any advantage from the longer growing season and greater supply of moisture, and will consequently produce a low yield as compared with the adapted varieties. The same thing applies to the early varieties grown in the northern states.

CORN-GROWING SECTIONS OF KANSAS.

Because of the radical variation in soil and climate in Kansas, the state may be divided into nine corn-growing sections. The division lines of the sections have been arbitrarily located. The characteristics upon which the divisions are based merge so gradually into one another that it would be impossible to locate exact dividing lines.

The soils of section 1 (Fig. 99) are derived largely from glacial drift, or material brought down by ice glaciers when

that part of the state was covered with ice. These soils are usually exceptionally well adapted to corn. As a rule, they are deep, friable clay loams or silty clay loams, containing, in the virgin state, an abundant supply of organic matter.

In section 2 (Fig. 99) the soils are residual in character and are derived largely from sandstones and shales. They are often deficient in organic matter and comparatively low in fer-

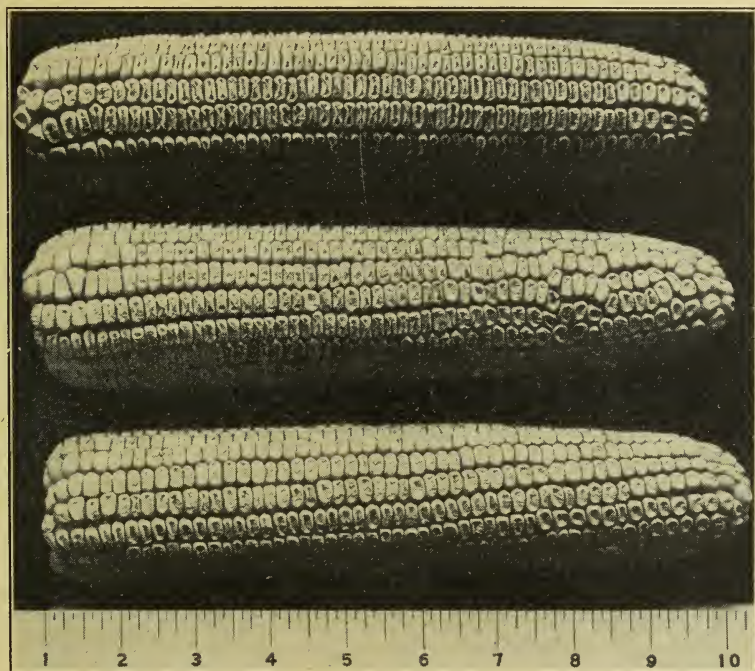


FIG. 100. Typical ears of Shawnee White corn. This variety is a medium large one, exceptionally well adapted for growing on the better types of soil in northeastern Kansas, especially the counties bordering the Kaw river. This variety was developed by J. A. Ostrand, of Elmont Shawnee county.

tility. Practically all the soils of this section are silt loams, clay loams, and clays underlain by retentive subsoils of heavy clay. The northern portion of this section, as a whole, is better adapted to corn than is the southern portion, because of the difference in the type and fertility of the soil.

Section 3 (Fig. 99) includes the "flint hills" and rough limestone country, which are largely pasture lands. Nearly all the upland in this section is poorly adapted to the production of corn because of the shallow nature of the soil. The creek and

river bottoms make splendid corn lands, and on these soils corn is the principal crop. Some of the more level and deeper soils on the upland in the northern part of this section are well suited to the production of corn.

In the sections comprising the rest of the state climatic conditions are the factors most likely to govern the productiveness of the corn crop. For this reason the various divisions are based entirely on these factors. The precipitation gradually decreases from east to west, and as the rainfall diminishes the conditions for corn become more adverse.

With the exception of the northeastern part of section 6 (Fig. 99) the western half of the state is not well adapted for growing corn except on well watered river and creek bottom soils. The sandier soils are better corn lands than the heavier types, especially those which are underlain with subsoils containing more or less clay. The varieties of corn most extensively grown in section 1 (Fig. 99) are Reid's Yellow Dent, Boone County White, Hiawatha Yellow Dent, and Iowa Silvermine. Reid's and Iowa Silvermine are medium early-maturing varieties and are best adapted to the uplands and the less fertile types of soil, while the other two varieties are larger and later maturing and are usually grown on the best lands.

In variety tests conducted by the agronomy department of the Kansas State Agricultural College in coöperation with farmers throughout this section the Pride of Saline and Iowa Silvermine produced the highest yields on the uplands, especially on the thinner types of soil, while Shawnee White and Boone County White made comparatively good yields on the bottom lands and the very fertile soils. The Shawnee White is an outstanding variety. The Pride of Saline, however, is not a popular variety because of its lack of uniformity as compared with the other varieties.

In section 2 and 3 (Fig. 99) Pride of Saline, Iowa Silvermine, Midland Yellow Dent, and Kansas Sunflower are the varieties adapted to the uplands and thinner soils, while Commercial White, Boone County White, and Hildreth Yellow Dent are grown on the bottom lands and the more fertile soils. The last-mentioned variety is adapted for only strong soils. When grown on good land in favorable seasons the Hildreth corn is a heavy yielder. For average seasons, however, the Commercial White is to be preferred to the Hildreth as well as to the Boone County White. A variety known as the Blue and White

is extensively grown in many localities in these sections. It is a hardy, medium-sized variety very similar to the Pride of Saline except for the color of the grain, which is blue and white, as the name of the variety suggests. The Reid's Yellow Dent has consistently given poor results in these sections, especially the southern parts. On very thin soils, subject to drouth, the Freed's White Dent, and other hardy western-grown varieties, usually outyielded the larger ones.

As a rule, medium-sized varieties of corn, such as Pride of Saline, Iowa Silvermine, Kansas Sunflower, and Reid's Yellow Dent, are best suited to sections 4 and 5 (Fig. 99). The Com-

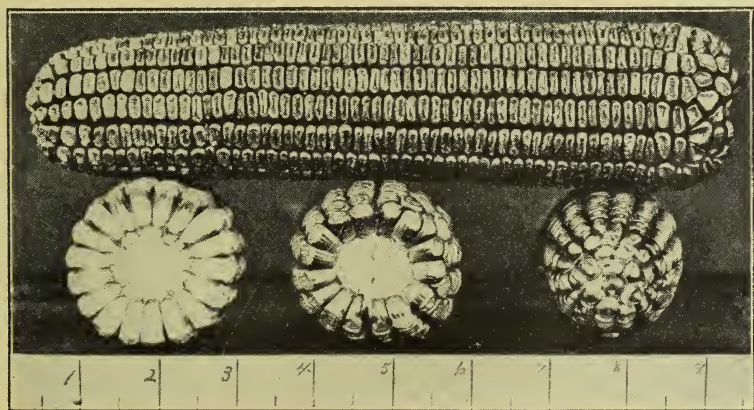


FIG. 101. Typical ears of Kansas Sunflower corn. This variety is a yellow dent corn well adapted for growing under average conditions throughout eastern Kansas.

mercial White and the Boone County White do well on the better corn lands. The former variety matures too late to grow in the northern part of section 4. Reid's Yellow Dent and Boone County White are not so hardy or vigorous as the other varieties, and therefore are not so well adapted for growing under adverse conditions. These varieties often do not thrive well in section 5 because of high temperatures likely to prevail in this part of the state. The Pride of Saline has consistently outyielded the other varieties tested out in coöperation with farmers in the central part of the state. It is one of the best adapted varieties known for growing throughout central Kansas. Adapted strains of Iowa Silvermine and any properly selected, thoroughly acclimated variety that has been grown in this part of the state many years give good results.

Adapted strains of Iowa Silvermine, Pride of Saline, and Kansas Sunflower are suitable for growing on the better soils in sections 6 and 7 (Fig. 99), while Freed White Dent and other acclimated varieties are best for the uplands. For growing in sections 8 and 9 (Fig. 99), acclimated varieties, such as Freed White Dent, Cold Bloody Butcher, Sherrod White Dent, Colorado Yellow Dent, and adapted strains of Iowa Silvermine and Pride of Saline, are recommended.

ACCLIMATED VARIETIES BEST.

Experiments conducted at the Agricultural College and co-operative tests conducted with farmers in various parts of the state show that home-grown seed of an acclimated variety and

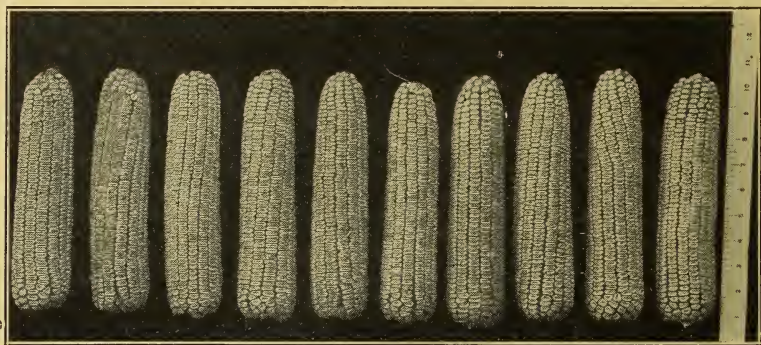


FIG. 102. Typical ears of Pride of Saline corn. This is a hardy, vigorous-growing variety which was developed in western Kansas and is especially well adapted for growing in the central part of the state. It is a good illustration of the type of corn that gives best results under average conditions in Kansas.

of good quality will outyield seed introduced from other localities. Kansas-grown seed of seven different varieties was compared with seed of the same varieties introduced from seven other states. These comparisons were made on the Kansas Experiment Station Farm at Manhattan, Kansas, during the seven-year period, 1903-1909, inclusive. With but one exception, the seed produced in Kansas outyielded that introduced from other states. For the forty comparisons that were made, the average yield was 6.5 bushels per acre in favor of the Kansas-grown seed. This is especially evident when corn is moved to a less congenial environment; that is, from a favorable to an unfavorable corn-growing locality. For instance, corn grown on the rich glacial soils of northeastern Kansas, or on similar soils in Iowa or any other eastern state,

does not, as a rule, do well on the less fertile residual soils of southeastern Kansas. Varieties of corn moved west in the state a considerable distance do not usually produce as well as the acclimated varieties. Results obtained in coöperative tests demonstrate that where a variety of corn has been grown in a given locality for many years, and the seed properly se-

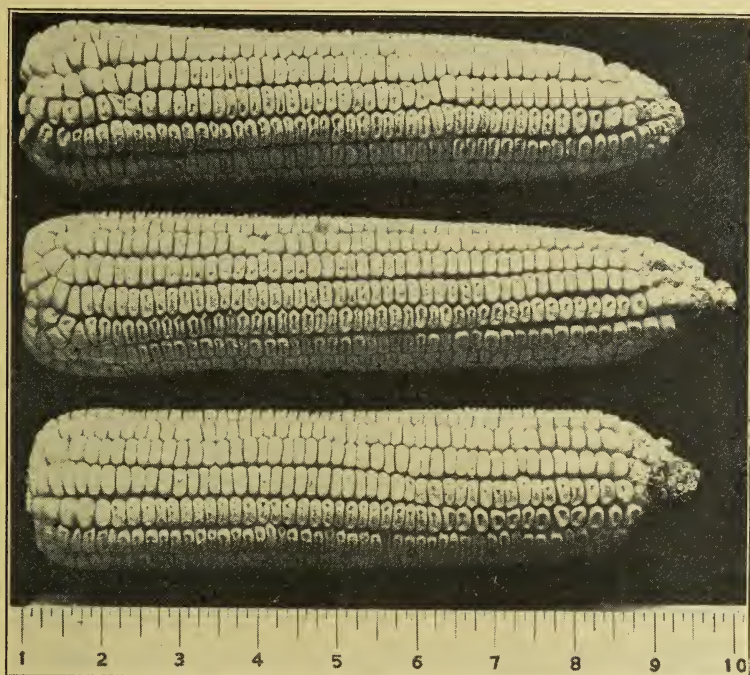


FIG. 103. Typical ears of Freed White Dent. This variety was developed by J. K. Freed, of Scott county, Kansas. It is one of the best western Kansas varieties and is a superior early variety for eastern Kansas.

lected each season, that variety is, as a rule, a superior one for growing in that locality.

Similar results were obtained, in variety tests conducted in coöperation with farmers throughout the eastern half of the state, in which home-grown seed of Kansas Sunflower, Boone County White, and Reid's Yellow Dent corn were compared with seed of the same variety introduced from other parts of the state. In a majority of the tests the home-grown seed was originally secured from the same source from which the introduced seed was obtained. That is, the introduced and the home-grown seed were of the same strain of corn, but the

home-grown seed had been locally grown for several years and had thus become more or less acclimated. During the six-year period, 1911 to 1916, fifty-five comparisons were made. The results are summarized in Table No. 4. No data was obtained for 1913 because of drouth.

TABLE IV.—*Comparative Yields of Home-grown and Introduced Seed Corn.*

YEAR.	Number of tests.	Average yield per acre, bushels.		Difference in yield, bushels.
		Home grown seed.	Introduced seed.	
1911.....	7	28.3	23.2	5.1
1912.....	15	34.4	29.4	5.0
1914.....	12	29.9	26.4	3.5
1915.....	8	53.4	49.8	3.6
1916.....	13	21.3	18.8	2.5
1917.....	10	36.2	32.9	3.3
Average..	65	33.9	30.1	3.8

HARDY VS. NON-HARDY VARIETIES.

In tests conducted by the agronomy department in coöperation with farmers, it was often noted that varieties of corn developed in central and western Kansas gave comparatively high yields when grown in eastern Kansas. The early western Kansas varieties as a rule out-yielded eastern Kansas varieties similar in size and time required to mature, even though the latter had the advantage of being home grown. The Pride of Saline, which was developed on the Saline river bottom soil

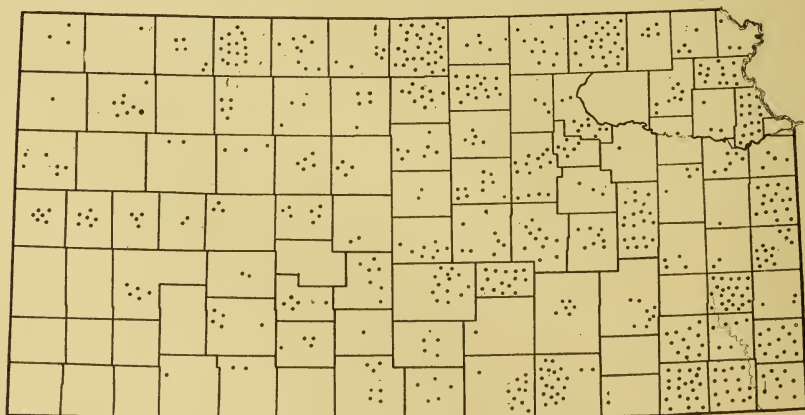


FIG. 104. Map showing location of variety tests of corn, conducted by the agronomy department of the Kansas State Agricultural College in coöperation with farmers throughout the state during the six-year period, 1911-1916. The recommendations regarding the adaptability of various varieties of corn are based on results of these variety tests.

in Russell county, was superior in yield to most other eastern-developed varieties similar in size.

The environment for corn in western Kansas is not favorable because of cool nights during the spring and hot, dry conditions that are likely to prevail during midsummer. Natural selection is very rigid and only the more vigorous and hardy strains survive. Corn that is grown under these conditions for many years acquires a hardiness and vigor that is rarely developed in varieties produced in a congenial environment. In order to show the value of the factor of acquired hardiness in varieties of corn grown under western Kansas conditions, the Freed White Dent and Corn Planter were grown under comparative conditions in a number of tests in eastern Kansas. The latter variety is similar to the Freed in size and matures in the same length of time. It was developed under Iowa conditions, which are comparatively favorable for corn. Seed was obtained each season from Henry Field Seed Company, of Shenandoah, Iowa. The Freed White Dent was secured from J. K. Freed of Scott City, Kansas. Tests were conducted each year in Riley, Allen, Butler, Dickinson and Reno counties. The results are given in Table No. 5.

TABLE V.—*A Hardy Versus a Nonhardy Variety of Corn.*

VARIETY.	Average yields.			Bushels per acre.		
	1914.	1915.	1916.	1917.	1918.	Average.
Freed White Dent.....	51.1	24.3	55.1	20.7	19.3	34.7
Corn Planter.....	35.8	16.3	43.5	13.0	10.0	23.7

Similar results were secured in a comparison of the Reid's Yellow Dent and the Pride of Saline. The former variety is perhaps the best selected and "bred" variety in existence. It was developed in Illinois, in an environment exceptionally well adapted for corn. The Reid's Yellow Dent used in these tests was grown in eastern Kansas from six to ten years and was therefore acclimated to a considerable extent.

Two comparisons were made, one in a group of counties, Marshall, Nemaha, Brown, and Doniphan, in northeastern Kansas, the most favorable corn-growing section in the state; and the other in Allen and Wilson counties in southeastern Kansas, where soil and climate are less congenial for corn. The results are given in Table 6. The yields are the average of forty-two

tests, of which four or more were conducted in each section for the respective seasons.

The Pride of Saline out-yielded the Reid's in both parts of the state every year. The difference in the comparative yields, however, was much greater where the conditions were the least favorable for corn.



FIG. 105. Corn planted with a lister.

TABLE VI.—*Comparative Yields of a Hardy and Nonhardy Variety of Corn Grown Under Congenial and Noncongenial Conditions.*

LOCALITY.	Average yields per acre.					
	1914.		1915.		1916.	
	Pride of Saline.	Reid's Yellow Dent.	Pride of Saline.	Reid's Yellow Dent.	Pride of Saline.	Reid's Yellow Dent.
Northeastern Kansas.....	29.0	26.2	64.1	61.6	44.4	37.9
Southeastern Kansas.....	45.8	36.6	45.5	27.4	20.4	13.7

These results indicate that under favorable conditions a variety that is adapted for growing under adverse conditions may have but little if any advantage over a variety that is not hardy, but that on poor soils or under unfavorable climatic conditions the hardy variety will produce much better yields.

Corn may be moved to a more favorable environment with good chances of success, but introducing a variety adapted to a congenial environment to a less congenial one is not advisable.

Very often poor yields of corn are due to the growing of a variety under conditions to which it is not adapted. To be adapted, a variety of corn should be thoroughly acclimated, and of the proper size to fit into the normal growing season and to utilize to the best advantage the normally available supply of moisture or plant food.

METHODS OF GROWING CORN.

Two general methods of growing corn are employed in Kansas, namely surface-planting and listing. The two methods are each adapted to certain conditions, and are superior one to the other only when the conditions to which they are respectively adapted exist. Modifications of both of these methods are practiced to some extent.

LISTING.

Listing is a method of growing corn adapted to regions having a limited rainfall and light types of soil. This method is utilized to a larger extent than any other one in sections 3 and 4 (Fig. 99), and almost exclusively in parts of the state west of these sections.

In section 3 and the eastern portion of sections 4 and 5 (Fig. 99), listing may or may not give better results than surface planting. The results depend on the type of soil and seasonal conditions. In the drier seasons listing is usually the superior method, while in the wetter seasons surface-planting may be best. Listing is often advisable for light soils, while surface planting may give best results on heavy clay soils in the same area.

Under conditions to which listing is adapted, its advantages over surface-planting are many. The preparation of the ground previous to listing is not so expensive. In many parts of the state no preparation whatever is given the ground before listing at planting time. Listed corn can also be cultivated and kept free from weeds much more easily than surface-planted corn. For this reason a farmer can care for a larger acreage of listed than of surface-planted corn. Corn planted with a lister stands up better during the later stages of growth, and is very rarely blown down on account of the roots pulling out, while that which is surface-planted is subject to lodging.

Listed corn stands dry weather better, and wherever moisture is usually the limiting factor in growth, listing is to be preferred. The greater resistance of listed corn to drouth is due to two reasons. The first is that the root systems of the corn plants begin their development deeper in the soil, and therefore are not so subject to drouth as the shallower root systems of surface-planted corn. The other, and perhaps more important reason, is that, because of the less favorable growing conditions for the listed corn in the spring, the corn planted in this way does not produce so much or so tender and succulent foliage as that which is surface-planted. It is a well-known fact that vegetation which makes a quick, succulent, and abundant growth is not so hardy as that which develops more slowly and not so luxuriantly. Because of the greater leaf area produced by the surface-planted corn, more moisture is required for its maintenance than for that of a similar stand of listed corn. If moisture is the limiting factor during the later stages of growth, a given amount of it will maintain listed corn longer than surface-planted corn. Very often several days or a week or more added to the life of the crop will tide it over a drouth or will maintain it enough longer to permit of a considerable increase in the production of grain.

Corn planted with a lister does not germinate so readily as that which is surface-planted. There is also more danger of listed corn being covered by heavy, dashing rains, and in case of sloping fields it is likely to be washed out by water running down the furrows. On level fields, where drainage is not good, corn planted with a lister may be drowned out by water standing in the furrows.

DOUBLE-LISTING.

Double-listing consists in blank-listing either in the fall or spring, and in then splitting the ridges at planting time. This method often gives excellent results. It puts the land into ideal condition to absorb rains, and insures the stirring of all the ground, which is not the case where single-listing is practiced. Double-listing in the spring does not always give satisfactory results, especially if the weather is dry throughout the spring, because of the greater drying out of the surface soil, due to its ridged and furrowed condition. Fall listing, especially where the rows run east and west, so as to catch and hold the snow, is usually a good practice. The opening up of the furrows ex-

poses the subsoil to alternate freezing and thawing weather. This is desirable. At planting time the ridges may be split, or the corn may be planted in the same furrow, depending upon the condition of the ground. Blank-listing early in the spring, and then planting in the same furrow with a lister, also is a good practice. More difficulty is usually experienced with weeds where this method of preparation is practiced than where the ground is double-listed.

BLANK-LISTING.

A practice that is rapidly coming into favor in certain sections in eastern Kansas is to blank-list and then plant the corn with a planter or drill a few hours or a day or two later, depending on the soil and seasonal conditions. Where the planting is delayed for some time after the ground has been listed, the bottom of the furrow has an opportunity to become warm, and a better germination and a stronger early growth of the corn is obtained. Thus one of the disadvantages of listing is avoided, while all of the advantages are attained. This method is not practical in western Kansas, as the soil in the furrow is likely to become too dry to insure the germination of the corn,

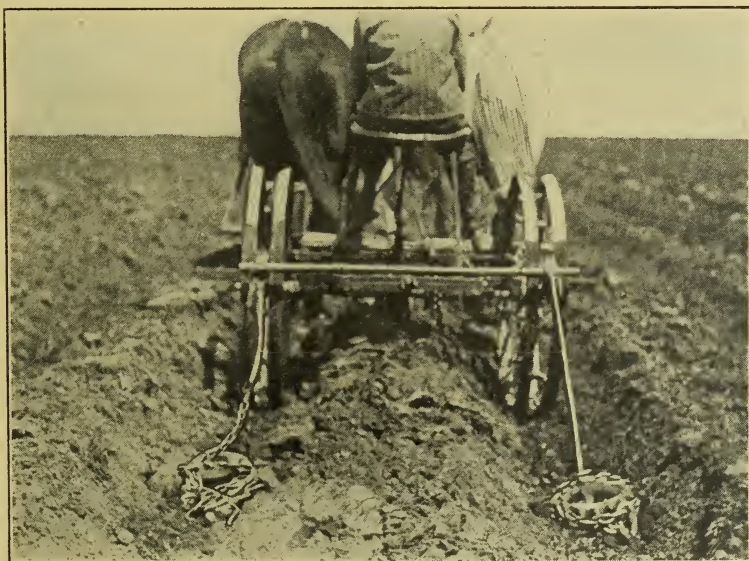


FIG. 106. Planting corn in lister furrows a day or two after listing.

nor is it feasible in eastern Kansas on land where the subsoil is heavy and sticky and bakes readily.

Listing at right angles to the slope of the land or parallel to contour lines, wherever practical, in order to prevent the loss of water by run-off and to avoid soil erosion, is a practice that should be more generally followed, especially in the drier sections of the state. Where listing is done in this way the lister furrows hold the water until it has an opportunity to soak into the subsoil, and the largest possible quantity of every rain is stored in the soil. The cultivation of the fields parallel to con-



FIG. 107. Surface planted corn.

tour lines is a practice that will eventually become well established wherever moisture is the limiting factor in the growth of the corn.

THE DEPTH TO LIST.

The depth to list varies with the nature of the soil, the annual rainfall, and the time of planting. The lighter types of soils, especially sandy lands, may be listed much deeper than clay loams or heavy clays. In the eastern part of the state, where the rainfall is usually abundant in the spring, deep listing is not advisable, as it increases the danger of poor germination and the washing under of the corn. The usual depth is four to five inches; that is, the lister is adjusted so that the

share runs about that distance below the general level of the surface of the ground, with the subsoiler set to loosen the soil in the bottom of the furrow an inch or so deeper. Toward the western part of the state, where the rainfall is lighter, the depth of listing may be increased. In west-central Kansas and western Kansas the deep-listed corn is more resistant to drouth than that planted shallower, and for best results the listing should be done as deeply as the lister will work to advantage, which is six to eight inches below the surface of the soil.

The importance of deep listing cannot be too strongly emphasized in western Kansas. Corn planted in this way will not make so great or so rapid a growth as that listed in shallow or at a medium depth, but it will stand drouth much better and is more certain of making a profitable crop. In planting corn in all parts of the state, early listing or that done before the ground becomes warm, should not be so deep as that later in the season.

SURFACE-PLANTING.

Surface-planting is adapted to heavy, wet soils and to localities in the state where the rainfall is excessive in the spring. In the parts of the state where the annual precipitation is more than thirty-five inches, nearly all the corn is and should be surface-planted. Corn planted in this way germinates better and makes a more rapid, vigorous growth during the early part of the season than listed corn, largely because the growing conditions are more favorable near the surface than in the bottoms of the lister furrows. Because of the greater growth of foliage, surface-planted corn develops a larger, more vigorous stalk and with a favorable season produces a larger yield than listed corn. Ground that is in condition for surface planting does not wash so badly as that which is listed, and there is comparatively little danger of the young plants being destroyed by heavy, dashing rains. The plowing of the ground which is necessary where corn is surface-planted, puts it into much better physical condition than can be obtained by listing ground, double-listing excepted.

FURROW OPENERS.

The furrow-opener method of planting corn is a modification of surface planting and has several advantages of the latter method. The furrow openers consist of a set of disks that are

attached to the shoe of the planter and open up a shallow furrow in which the corn is planted. A number of tests were conducted by the agronomy department of the Kansas State Agricultural College in which the furrow-opener method of planting was compared with ordinary surface planting. The use of the furrow openers increased the average yield 4.1 bushels an acre in tests covering four years. Corn seeded in this way may be cultivated to a greater advantage than that which is



FIG. 108. Corn planted with surface planter with furrow opener attachments.

surface-planted. The spike-tooth harrow may be used with less injury to the young corn, and the weeds in the row can be covered more readily by early cultivation. The root crowns start more deeply in the soil and the corn stands up better. In fact, many of the advantages of listed corn are obtained by use of furrow openers.

In western Kansas, where it is necessary to cover corn deeply to prevent the drying out of the loose soil over and around the kernels, the furrow-opener method of planting is not always practicable, as the corn cannot be covered deeply enough.

THE LOOSE-GROUND LISTER.

The loose-ground lister is practically a corn planter built strong enough to permit of the use of an extra large set of furrow openers which open a furrow almost as deep and large as those made with a lister. This method of planting is adapted to the lighter types of soils and to deep, friable loams that have been recently plowed or are in a fairly loose condition. The usual practice is to open up the furrows with the loose-ground lister and then follow with a corn planter or drill to plant the corn, although it is possible to plant at the same time that the furrows are opened.

PREPARING THE SEED BED.

The nature of the preparation of the seed bed for corn varies with the soil, the annual precipitation, the preceding crop, and the seasonal conditions, as well as with the method of planting employed. In most parts of the state thorough and early preparation of the land before planting is profitable practice.

PREPARING THE LAND FOR LISTED CORN.

Since corn can be planted with a lister without any previous treatment, too little attention is given the preparation of the land where this method of planting is employed. The proper cultivation of the land before listing very rarely fails to produce paying results.

DISKING.

Spring disking is the most popular method of preparing ground for listed corn, and, on the whole, is very satisfactory. This treatment leaves the ground in excellent condition to retain moisture, often puts it into better condition to absorb moisture, cuts up and works into the ground cornstalks, trash and manure, thus hastening the decay of these materials, kills weeds that have been started and hastens the germination of those that have not sprouted.

The time to disk for corn in the spring depends upon a number of conditions. If the alternate freezing and thawing of the ground in the spring leaves the soil loose on top, disking is not necessary or advisable until a crop of weeds has started. If the ground comes out of the winter in a crusted condition, or is crusted by heavy early spring rains, disking as early as the condition of the ground will permit is advisable. A second disking is often advantageous if heavy rains pack the ground or a crop of weeds starts too far in advance of planting time.

Disking puts the ground into better condition for listing and cultivation, and the advantage gained in this way is often sufficient to pay for the extra work of disking, even though no increase in yield is obtained.

PLOWING FOR LISTED CORN.

Plowing either in the fall or in the early spring, and then planting corn with a lister, form an excellent method of preparing a seed bed for corn, provided the ground becomes sufficiently settled to permit of a good job of listing. In this way the soil may be worked into the best possible seed-bed if the right conditions exist.

The disadvantages of this method are several. It is not adapted to seasons having dry springs, especially with light soils. The cost of preparing and planting is larger than with the usual method of preparing ground for corn. If the soil is not firmly settled it will be impossible to do a good job of listing. Weed seeds turned under when the ground is plowed will be liable to germinate with corn in the bottom of the furrow, where they are hard to kill, making it difficult to keep the corn clean. Ground containing considerable trash cannot be handled in this way.

Plowing the land for listed corn can usually be depended upon to give excellent results in normal seasons, especially on the heavier types of soil in section 3 and on the western edge of section 1 and in the eastern portion of section 4. (See Fig. 99). This method is not recommended for other sections of the state.

PREPARING LAND FOR SURFACE-PLANTED CORN.

Where the corn is to be surface-planted, fall or early winter plowing, as a rule, gives best results. Land fall-plowed is more thoroughly subjected to weathering agencies during the winter, which puts the soil into better physical condition, and tends to liberate in larger quantities the plant food locked up in the soil particles. Fall plowing also results in the destruction of many insects which are injurious to corn, and the destruction of these pests alone often makes it desirable to plow in the autumn. Heavy clay soils, when plowed early in the fall, often have to be plowed a second time in the spring for best results, because of the tendency of the soil to run together and become too compact. Sometimes the same condition is obtained in the case of late fall plowing if winter conditions are

conducive to the settling of the soil. Unless the land is given proper cultivation before planting time, spring plowing in such cases will sometimes prove better than fall plowing.

Very often, because of lack of time or a crop being on the land, plowing has to be deferred until spring. Spring plowing should be done as soon as the condition of the ground will permit, since the longer the period between plowing and planting the greater the accumulation of moisture and plant food in the soil. Sometimes, during an open winter, conditions may be suitable for plowing in midwinter or late winter, and whenever possible advantage should be taken of such opportunities. Care should be taken that the ground is in proper tilth when the plowing is done, especially in the spring.

THE DEPTH OF PLOWING.

The depth to plow varies with the nature of the soil and the time when the work is done. Deep fall plowing, seven to eight inches, is advisable on nearly all good corn land. On thin soils, especially when the top soil has been largely eroded away, deep plowing may not be advisable, and in some cases may be injurious. Where the ground has not been previously plowed more than four or five inches, it is best to plow deeper gradually until the desired depth is reached, as turning up a considerable amount of unweathered soil may result in decreased yields for the first season.

PLANTING CORN.

Checking or Planting in Drill Rows.

Results of experiments show conclusively that, so far as yields are concerned, there is very little difference in planting in hills or in drill rows, where equivalent stands to the acre are obtained. The check-row method of planting permits of an easier control of the weeds, in that the corn may be cultivated both ways. This is often very important, as continued wet periods frequently give weeds an opportunity to obtain sufficient growth to make it difficult to cover or plow them out. The general practice where corn is surface-planted is to check-row rather than to plant in drill rows.

THE TIME TO PLANT.

The time to plant corn varies with the season and the locality. The growing season in southern Kansas is from two to three weeks earlier than that in northern Kansas. In the

western part of the state the altitude is a factor influencing the time of planting in that the season is shortened as a result of the greater elevation. Under average conditions there is a period of about three weeks during which corn may be planted with equal chances of success, although sometimes, because of peculiar climatic conditions, very early or very late plantings are best. In section 1 and the northern portions of section 4 (Fig. 99), from May 1 to 20 is, on the average, the best time to plant corn, while in southern Kansas most of the corn is planted in the last three weeks in April.

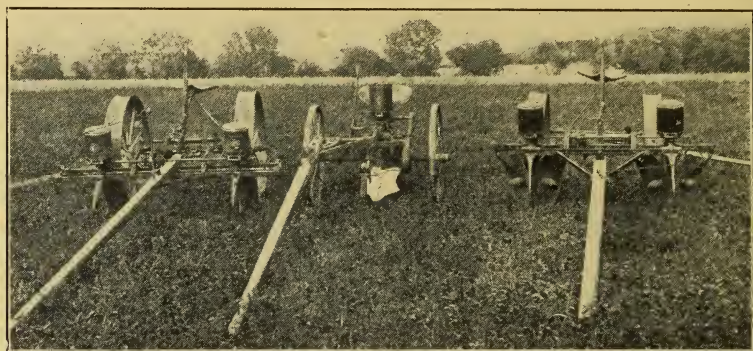


FIG. 109. Implements used in planting corn: Surface planter; lister; surface planter with furrow opener attachments.

When the ground becomes sufficiently warm to start the leaves on the deep-rooted trees, like the oak, the walnut and the Osage orange, it is time to plant corn.

The time required to mature the variety of corn grown is a factor to be considered. Early-maturing varieties may be planted comparatively late with good results, while late-maturing ones must necessarily obtain an early start in order to ripen properly. Since the top soil becomes warm earlier than the subsoil, the surface-planted corn may be seeded earlier than listed corn. A wet soil warms up more slowly than a dry one; therefore, corn can be planted in the drier soils earlier than in the wet ones. Early planting is safer in western than in eastern Kansas, because of the natural drier condition of the soil in the western part of the state. In southern Kansas, especially on the thinner uplands, planting as early as conditions will permit is usually advisable, in order that the

corn may be well along towards maturity before the hot, dry weather of midsummer.

RATE OF PLANTING.

It is a difficult matter to obtain always the proper stand of corn, for there are many factors beyond the control of the farmer that reduces the stand. The general tendency is to plant much too thick, with the hope that enough corn will survive to furnish a satisfactory stand. This practice is not desirable, as too often the stand secured is too thick for the best results. If the soil has been kept free from injurious insects by suitable methods of rotation, if a good seed bed is prepared for the crop, and if seed of strong vitality is planted at the right time and properly covered, the stand secured should be somewhere near that planted. Under these conditions the best results will be obtained by planting about as thick as or a little thicker than the stand desired.

The rate of planting should vary with the size of the variety, the fertility of the soil, and the average annual rainfall. A small-growing, early-maturing variety may be planted much thicker than a large-growing, late-maturing one. The planting should be thicker on rich, fertile soils than on soils thin and less fertile. On rich soils, however, the corn will often stool excessively, in which case rather thin planting is advisable. In eastern Kansas, where checked-rowed, surface planting is practiced, two to four kernels are planted to the hill, with an average rate of three kernels a hill. Listed and drilled corn in the eastern part of the state is usually planted at the rate of one kernel every sixteen to twenty-one inches. A perfect stand at these rates, however, would ordinarily be much too thick. In eastern Kansas a stand that will average one stalk every twenty-one to twenty-four inches is amply thick to produce maximum yields under normal conditions. On unusually fertile soils thicker planting may be practiced to advantage. As the rainfall diminishes from eastern to western Kansas, the stand to the acre should decrease in the same ratio, or the size of the variety grown should decrease accordingly. As a rule, in central Kansas stands in which the stalks average twenty-four to thirty inches apart will give the best results, while in extreme western Kansas thirty to thirty-six inches is not too great a distance between stalks. Small-growing, early-

maturing varieties of corn must necessarily be planted thicker than this to obtain maximum yields.

Results of numerous experiments show that the highest yields of stover can usually be obtained by thick planting. If corn is grown only for silage, or for stover, planting from 50 to 100 percent thicker than for grain is advisable.

THE DEPTH TO COVER CORN.

Corn should be planted sufficiently deep to insure the kernels being placed in moist soil, without danger of drying out. The depth is governed largely by the nature of the soil, by its moisture content when the corn is planted, and by the time of planting. As a rule, two or three inches is about right. On wet, heavy soils, two inches, or possibly less, may be sufficient, while on light, sandy soils, three or perhaps four inches is necessary for best results. Planting to this depth is often necessary in western Kansas to prevent the soil around the corn from drying out. Corn need not be covered so deeply early in the season as when planted late, as the ground does not dry out so rapidly early in the season.

CULTIVATION.

Every farmer realizes the necessity of cultivating corn. Profitable yields cannot be obtained without good cultivation. The principal object the average farmer has in mind in cultivating corn is to kill the weeds, which, in fact, is a most important object. Weeds rob the corn of moisture and plant food and decrease the yield in proportion to the amount that they use. There are, however, several other reasons for cultivating corn. A loose condition of the surface soil which is obtained by cultivation is necessary to conserve the moisture in the ground, and to absorb readily and to store the precipitation.

Cultivation also tends to develop plant food, an abundance of which is necessary if good yields are to be obtained. The natural agencies that bring about the formation of plant food are most active in warm soils, well provided with moisture and the proper amount of air. Soils that are hard and compact do not permit a sufficient circulation of air to furnish the oxygen needed for the various activities taking place in the soil. A lack of air retards the development of plant food and interference with the growth of the plant roots. Since cultivation conserves moisture and maintains the soil in a condition of good

alth, it indirectly increases the amount of plant food developed in that the right conditions for the formation of plant food are maintained.

The right kind of work in preparing the seed bed for corn will often reduce the amount of cultivation necessary after



FIG. 110. A lister cultivator at work. Two-row machines of this type are more practicable where large areas are grown. This implement is a very effective one for early cultivation of listed corn.

planting, which is important in that corn-cultivating time is usually the busiest season of the year.

After planting, the harrow may often be used to advantage on both listed and surface-planted corn. Surface-planted corn can be harrowed safely before it is up, but when the shoot is fairly out of the ground it is not best to harrow again until the

corn is two or three inches high, and then preferably with a light harrow or weeder. Harrowing when the corn is small, especially with a heavy harrow, is likely to cover or destroy many plants.

Weeds that are just germinating or that have not yet obtained a good root-hold on the soil are very easily killed by light cultivations such as can be accomplished with the harrow or weeder. A good harrowing at the proper time is often the cheapest and most efficient way of controlling weeds during the first stages of growth of the corn. The harrow or the weeder can also be used to advantage in breaking up a crust caused by a heavy, dashing rain.

The harrow is used but little on listed corn, mainly for the reason that the lister cultivator, an implement admirably adapted for use in cultivating corn planted in lister furrows, can ordinarily be used as soon as the corn needs attention. This implement, if properly adjusted is very efficient in eradicating weeds, and also does good work in stirring the ground. Ordinarily the lister cultivator is used twice—once with the disks set to throw the soil away from the corn, and once with the disks set to throw the soil to the corn—although an extra cultivation throwing the soil either out or in is sometimes advantageous. It is important that the cultivator be set to kill or cover all the weeds in the row, as those which escape during the early cultivations cannot, as a rule, be destroyed or covered later. This applies equally to all early cultivation of corn, regardless of the method of planting or the kind of implement used.

The ordinary shovel cultivator is used almost universally in cultivating corn after it becomes too high to harrow, or, in the case of listed corn, after the ridges have been worked down with the lister cultivator. As a rule, listed corn is cultivated from two to three times with the shovel cultivator, while surface-planted corn receives from three to six cultivations. The number and character of the cultivations that should be given depends on the type of soil, on the distribution of the precipitation, and on whether the ground is foul with weeds or reasonably clean.

Many experiments have been conducted for the purpose of determining how often corn can be profitably cultivated. The results obtained show that, ordinarily, from four to six culti-

vations are as many as are practicable. Too frequent stirring of the ground, especially when it is dry, may do harm rather than good, in that the dusty condition of the soil which results therefrom is effective in keeping rain-water from entering the soil readily, thus causing a greater run-off during heavy rains.

The ideal condition in which to maintain the soil is to have a mulch two or three inches in depth, composed of small lumps mixed with soil granules and reasonably free from dust. A mulch of this nature is effective in preventing the evaporation of moisture, and also readily absorbs and stores rains.

The proper depth of cultivation depends on the time when the work is done and on other conditions. On the average, two or three inches deep is best. While the plants are small and before the roots occupy the space between the rows, the ground may be stirred deeply with good results. Deep cultivation early is often necessary where the ground has been single-listed without any previous preparation, as it is important that the ridge between rows be thoroughly loosened. After the roots permeate all the soil, it should not be stirred to a depth of more than three inches. Practically all tests show that deep cultivation, which results in destroying a large number of roots, does more harm than good. Ordinarily, it is safer to cultivate listed corn deeper than surface-planted corn, because the root system of the listed corn has started deeper in the soil. A large majority of the roots of corn, however, are found in the first six or eight inches of soil, regardless of the method or nature of the planting; therefore listed corn may be damaged almost as severely as surface-planted corn by too deep cultivation.

The six-shovel cultivator is a much better implement for cultivating corn than the four-shovel one, except where there is considerable trash on the ground or where the weeds are numerous and well rooted. The six-shovel cultivator stirs the top soil more thoroughly, leaves it in better condition, and does not destroy so many roots as the four-shovel cultivator, since the six small shovels do not have to penetrate so deeply as the four large ones to stir the soil completely.

The ordinary practice is to cultivate corn until it is too high to work with a two-horse cultivator. An extra cultivation or two with a one-horse cultivator may be given to advantage under certain conditions. This practice, however, may or may not be satisfactory. If rains have heavily crusted the soil

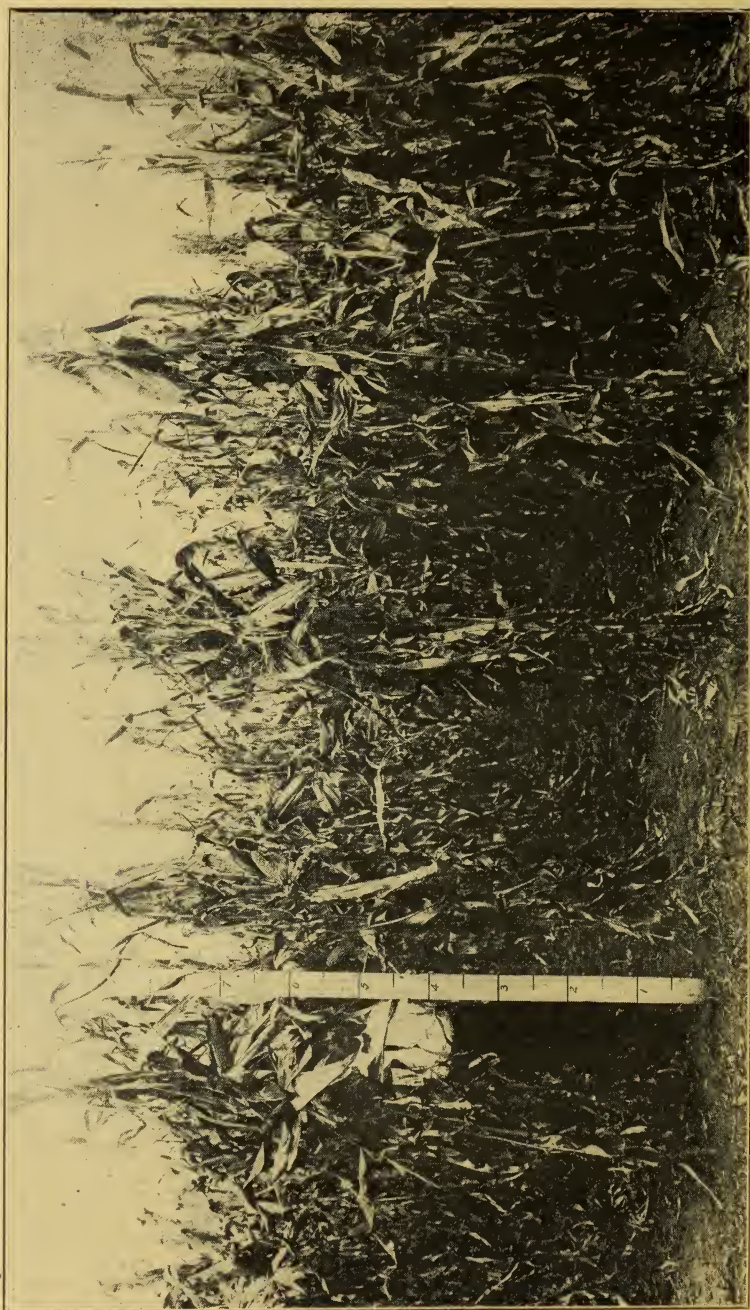


FIG. 111. A good crop of corn in Kansas.

shortly after the corn has been "laid by," or if a crop of weeds is starting, an extra cultivation with the one-horse cultivator will usually prove profitable. If, on the other hand, the ground is in good tilth and reasonably free from weeds, nothing is gained by cultivating after the ordinary "laying-by" time. These late cultivations should always be shallow to avoid damaging the corn roots.

Where the ground is free from weeds and in good tilth nothing is gained by cultivating it and more harm than good may be done, especially if many corn roots are destroyed. In sandy soils cultivation other than that necessary to control weeds is not necessary, since these soils are almost always in good tilth and absorb heavy rains readily.

Seasonal conditions vary so greatly from year to year that no one method of seed-bed preparation, planting, or cultivation of corn will consistently give better yields than every other method. The farmer who by the exercise of good judgment uses methods of tillage that meet the seasonal conditions to greatest advantage is the one who, on the average, is the most successful.

SEASONAL CONDITIONS DOMINANT FACTORS.

The rainfall during July and August governs largely the yield of corn. An abundant precipitation during July and the first of August almost always insures a good crop of corn while hot, dry weather during this period usually results in the failure or partial failure of this crop.

Under Kansas conditions, hot dry weather during July or August or a few days of hot winds at the time the corn is pollinating may greatly damage or entirely ruin a promising crop of corn. These conditions may destroy in a few days the accumulated benefits derived from thorough work in preparing the seed bed, and caring for the corn during the early part of the season, which under favorable conditions would have resulted in considerable increases in yield. Very often, because of drouth during the latter stages of growth of the corn, that which has the greatest capacity to yield because of the comparatively greater development of foliage is the first to dry up, while corn that has made a smaller growth because of poor cultural methods survives the drouth because of its lesser moisture requirements, and produces the greatest yields of grain.

Drouth is usually the limiting factor in growing corn in most

parts of Kansas. The effects of drouth can often be avoided or at least minimized by the right kind of farm practice. Dry weather usually prevails during the latter part of the growing season. If medium-early varieties are grown they often mature ahead of the dry weather and produce fair yields when the larger later maturing varieties may fail entirely. On the other hand, seasonal conditions may be the reverse, such as in 1917, and late varieties give the best results. On the average,



FIG. 112. Freed White Dent corn grown in eastern Kansas. This variety matured early and ahead of the dry weather. It was ready to feed fully two weeks before the standard eastern varieties were matured.

however, the medium-early varieties for any given locality are the most likely to escape injury from dry weather.

Another factor that often results in poor grain yields in a dry season is too thick a stand. In seasons of limited rainfall, too many stalks of corn per unit area often results in the exhaustion of the moisture stored in the soil before the grain is formed. Many farmers have noted the large number of barren stalks that are likely to occur in a dry year, and that in such a season rather thin stands produce the most and best corn. Thin stands in favorable seasons often yield as well as comparatively thick stands in that the ears are larger and better developed. By obtaining the optimum stand, failures may be

partially or entirely avoided in dry seasons, while the planting of too thick a stand often invites failure.

Planting corn in every other row or in rows seven feet apart often gives good results in dry seasons in that corn planted in this way withstands temporary drouths better than that planted in the ordinary way. The same amount of corn should



FIG. 113. Corn planted in wide-spaced or "alternate" rows—rows seven feet apart. This method of planting gives good results when corn is damaged by temporary drouths. It is practiced to some extent in western Kansas.

be planted per acre, however. That is, one row of the wide-spaced planting should contain as many stalks as two rows of that planted in the ordinary manner. This method of planting is recommended for central and western Kansas only.

It is not always possible to grow good crops of corn under Kansas conditions. The farmer, however, who maintains the organic matter content and fertility of the soil, properly rotates his crops, grows an acclimated variety suitable in size to his conditions and who practices methods that control weeds and conserve moisture, and who plants his crops opportunely will have a minimum of failures or unprofitable crops.

HARVESTING CORN.

The general methods of harvesting corn practiced in the state are: cutting and shocking and cutting for silage—practices in which the grain and fodder are both utilized—and husking the grain from the standing stalks. Until recently the latter method was by far most extensively employed. The value of stover is receiving greater recognition, however, and the practice of saving it for feeding purposes is becoming more general.



FIG. 114. A well-stacked rick of corn stover, located where it can be conveniently fed to stock.

Corn should be cut for fodder when the bottom leaves become dry, which, under ordinary conditions, is shortly after the ears become well glazed. At this time the corn possesses its maximum feeding value. If the corn is cut too soon it will be more subject to damage from weather and fungous growths and will yield less than if cut at the right time. If the cutting is delayed the stover deteriorates rapidly in quality.

The general practice is to cut the corn with a harvester and shock it in the field, where it remains, as a rule, until it is fed to the stock. As soon as the fodder becomes thoroughly cured, or at a convenient time in the late fall or early winter, many farmers stack it in large ricks in the barnyard, where it can be husked out and conveniently fed. This practice is a profitable one in that the damage caused by exposure to wet weather is to a great extent avoided.

The practice of husking corn from the field without utilizing the stalks except for pasturing cattle is a wasteful one. The plants, after the ears have been removed, if properly handled

contain considerable feeding value, especially when used for silage. If, because of drouth, poor yields of grain are secured, the percent of feeding value in other parts than the ears is much greater than when the crop matures normally, while in case of total failure of the grain the entire value of the crop is in the stalks. The farmer who depends solely on the grain for the results of his labor in growing corn is therefore obtaining only a part of the total value of his crop. This fact was demonstrated in an experiment conducted by the animal husbandry department in 1912. In wintering calves it was shown that an acre of corn placed in the silo was as valuable for feed as the shelled corn from an acre of ground and the stover from three acres.

When corn is produced for the purpose of feeding cattle, the greatest returns can be obtained by utilizing it in the form of silage. The proper time to cut corn for silage is when the ears become well glazed. Corn that fails to make grain because of drouth should be allowed to stand and mature as completely as possible without too great a loss of leaves as a result of the drying of the stalks. In other words, the corn should be allowed to remain in the field as long as a considerable portion of the plants remains green, since the nearer the plants approach the normal ripening period the better the quality of the silage, even though no ears are produced. Corn that is nearly dry can be used for silage by the addition of the necessary amount of water to moisten it thoroughly as it is put into the silo.

The value of the silo for saving immature corn that has not matured properly because of dry weather was well shown in 1913, when corn of this character, harvested in the usual manner and shocked in the field, rotted in the shock and was practically worthless, while the same kind of corn placed in the silo made good feed.

"HOGGING DOWN" CORN.

"Hogging down" corn is a practice that is worthy of more extensive use in Kansas. This method of utilizing corn is entirely satisfactory if weather conditions permit. The hogs should not, however, be allowed to run in the fields when the ground is wet, as this will cause injury to the soil and may result in the grain being wasted. For the best results, the hogs should be limited to small areas rather than allowed to range through a large field. Where large areas are to be

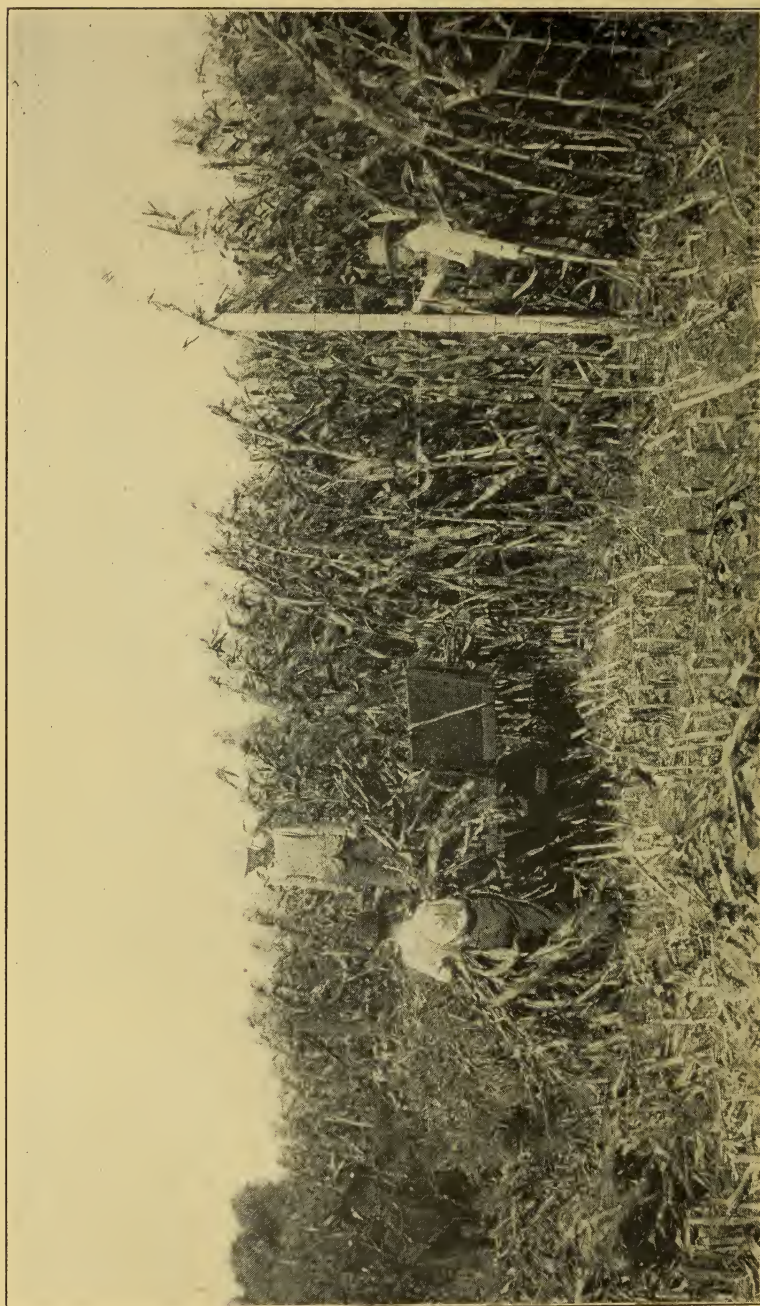


FIG. 115. Harvesting corn for silage. The crop is exceptionally well adapted for this purpose.

"hogged down" a temporary fence should be constructed, confining the hogs to a few acres. The fence can be moved as soon as the first area is pastured down, and the process continued until the whole field has been utilized. The expense of harvesting is saved and that which was produced from the field is returned to the soil with its maximum fertilizing value.

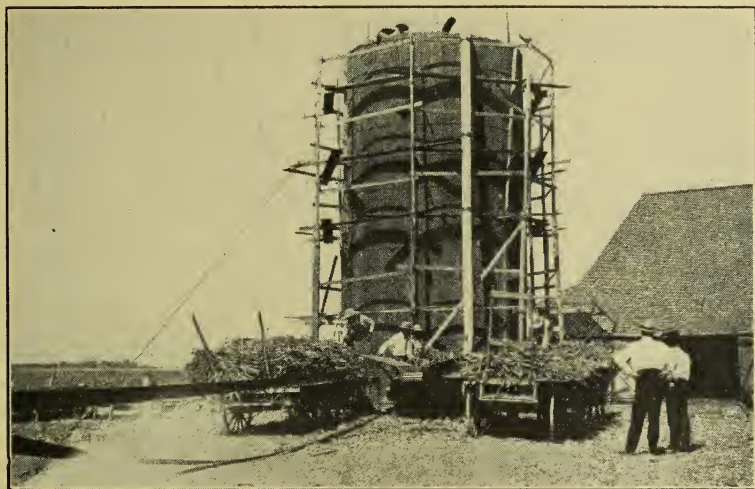


FIG. 116. Storing the 1913 crop of corn. Because of drouth this corn was of little value except as silage. The silo would not have been erected had a good crop of corn been grown.

SHRINKAGE OF CORN DURING STORAGE.

Many farmers grow corn for the market, and it is often a question whether it is preferable to store the grain for higher prices or to dispose of it at the time when it is harvested. Whether corn should be stored, or sold as it is husked, or soon after, depends on the corn market and the general supply and demand, the condition of the corn at harvest time, and the facilities available for storing for the grain. If the production of and the demand for corn are normal and the price is lower than economic conditions warrant, it is perhaps best to hold the corn. If, however, the price is within 25 percent of what it will likely be at any time during the year, under normal conditions it would be just as well to sell at harvest, as very little would be gained in storing corn for an increase in price of 25 percent or less. There is always more or less loss in storing corn, because of shrinkage, damage from weather, and injury by mice

and other vermin. Experiments show that reasonably dry corn when kept under the best of conditions will shrink in weight from 5 to 15 percent when stored for a period of six or more months, the amount of shrinkage depending on the condition of the corn when cribbed and the seasonal conditions that follow. The natural shrinkage, in addition to loss due to rats, mice and insects, plus the extra work involved in storing the corn, is usually sufficient to offset a 15 to 25 percent increase in the price of the grain.

STORING AND UTILIZING SOFT CORN.

Corn which is frosted before it matures and contains considerable surplus moisture is known as soft corn. Such corn will likely spoil if cribbed in the ordinary manner. It sells at a



FIG. 117. Extra storage capacity for corn is sometimes needed on Kansas farms in good seasons.

great discount under matured corn. While but little if any soft corn is produced in Kansas as a rule, an occasional season occurs in which much of the corn does not mature.

Soft corn should be utilized as rapidly as practicable by feeding to hogs and cattle. The dry matter in soft corn is practically equal to that of well matured corn for feeding purposes and when properly fed produces satisfactory results. Soft corn, however, that has been allowed to mold or rot is unsafe to use as feed.

The best way to handle soft corn, especially in Kansas, is to allow it to remain in the field or in the shock and husk it as it is needed for feeding. When soft corn is put in shocks, they should be made small and so constructed that a good circulation of air will be provided for. Corn that contains not more than 20 to 30 percent of moisture may be safely stored in nar-

row cribs that permit of a free circulation of air through the sides and bottoms. It is, however, dangerous to crib corn containing that amount of moisture in large bins unless some provision is made for ventilation.

When the crop contains a small percent only of soft ears it is advisable to sort these out. If they are cribbed with the good corn they will spoil and possibly injure sound corn in contact with them. Such spoiled corn would be dangerous for feeding purposes and would have to be sorted out before it is used for feed. Furthermore, soft corn can be utilized to advantage, if fed as fast as it is sorted, thus avoiding loss from rotting. Sorting out soft ears can be done to the best advantage when the corn is cribbed, although this work can be done at husking time. A box attached to the wagon makes a convenient place to put the soft ears when sorting is done in the field.

The use of common salt thoroughly sprinkled on corn at the rate of about eight quarts for every fifty bushels of corn will act as a preservative and tend to prevent spoiling. The application of salt, however, should not be considered an absolute preventative for the spoiling of soft corn. It merely aids the drying-out process, which results from good ventilation and tends to prevent heating. This treatment would not be effective on corn containing more than 30 percent of moisture, stored in large quantities.

SELECTING SEED CORN.

The vitality of the seed corn planted has much to do with the yield obtained. Seed of strong vitality that will germinate and insure a vigorous growth of the young plants, even though conditions are slightly unfavorable, is necessary if maximum yields are to be obtained. The general tendency is to disregard the value of the character of seed planted. Since one bushel of corn will plant from seven to twelve acres of land, from which, under ordinary conditions, there is obtained from three hundred to five hundred bushels of grain, it is evident that too much importance cannot be attached to the selection and care of seed corn. Every corn grower is warranted in spending considerable time or money in order to insure obtaining first-class seed.

There is only one really satisfactory method of selecting seed, and that is selection in the field after the corn becomes mature, but before a freeze occurs. At this time the maturity

and the conditions under which the selected ears are grown can be noted. If an earlier or later strain of corn is desired, ears of the desirable kind can readily be obtained. The conditions under which an ear is grown ordinarily determine its size. Some ears are larger than the average because of a thin stand or other advantage, while others are large because of the natural vigor of the plants upon which they were grown. The latter are the ones that should be selected for seed. If the seed corn is selected from the wagon or from the crib there is no



FIG. 118. Farmers selecting seed corn from the field.

way of ascertaining the conditions under which it was grown or from what kind of stalk it came.

The stalk is of as much importance in the breeding or improvement of corn as is the ear. Seed should be selected from strong, upright, leafy stalks of medium height that are largest at the ground and taper gradually to the tassel. The ears should be attached at a convenient height for husking, should have a shank of medium length and diameter, and hang down sufficiently to prevent water from entering the tip. The stalks from which ears are selected should have been grown under average conditions; that is, where the stand is good and the corn has had no special advantages. Ears that range above the

average in size are most desirable for seed purposes, but extremely large ones should be avoided. Experiments prove that moderately large ears—those that are a little above the average in size—are best for seed purposes, while excessively large ones often prove unsatisfactory.

The value of an ear of corn for seed—that is, the germinating power of the kernels—is governed largely by the conditions under which it matures. If an ear for some reason fails to mature properly, the seed is very likely to be deficient in vitality, and poor stands may be obtained because of lack of vigorous germinating power in the seed. The best indications of the proper maturity of the corn are a sound, firm condition



FIG. 119. This illustrates a method of preparing seed corn which is to be hung up to dry.

of ear, and a bright, glossy grain. If the ear is not firm, and if the kernels are lacking in luster and are more or less discolored at the tip end, the chances are that the seed does not have the highest degree of vitality, although it may germinate under favorable conditions. Ears of this kind should be avoided, since they do not yield so well as those which are well matured.

From two to three times as many ears as will be needed for seed should be obtained in making the field selection, as many of them will likely be found unsuitable when a closer examination of the ear is made for kernel character. The seed corn should be thoroughly dried, and stored under conditions where it will keep dry. Dry corn will not be injured by freezing. After the corn becomes dry, it may be stored in any well ventilated room or outbuilding where it will be free from rats, mice and other vermin. Corn that matures properly in the field can be stored without extra precautions in drying, but that which matures late and contains considerable moisture when the first frost occurs must be artificially dried to insure obtaining seed of maximum germinating power. One of the best places to dry corn is in the kitchen, the attic, or some other well-ventilated room in which the temperature will be kept above the freezing point. As soon as the corn becomes thoroughly dry it may be transferred to a more convenient storing place.

If it is not possible to select the seed corn as has been suggested, the next best method is to make the selection at the time when the corn is gathered. Selecting ears at husking time can be easily accomplished with but little extra time and effort after a person becomes accustomed to it. A box should be attached to the side of the wagon for use in keeping the seed ears separate from the other corn.

In the winter a germination test should be made to determine whether or not the seed is sufficiently high in vitality. Secure a composite sample of corn, made up of several grains taken from different places in each of a hundred or more ears. Thoroughly mix these kernels and take a sample of at least one hundred grains for the germination test. If 90 percent or more of the kernels germinate satisfactorily—that is, send out strong, vigorous sprouts—the seed is satisfactory. If more than 10 percent of the seed fails to germinate satisfactorily, other seed of known quality should be secured, or a test of each

ear made, and the ears of low vitality discarded. From ten to twelve ears of corn will plant an acre, and the amount of time required to test that number of ears is insignificant as compared with the results that will be secured by planting strong seed.

INSECTS INJURIOUS TO CORN.

The corn plant, like all other cereal and forage plants, is subject to attack from numerous enemies, such as insects, rodents, and birds. While the number of insects infesting corn is very



FIG. 120. Results of germination test of corn. The kernels in each square are from a different ear. Only three of the nine ears germinated satisfactorily.

large, the number which cause any serious injury is exceptionally small. In Kansas there are probably not over twenty species of insects that may be regarded as seriously injurious to this crop. Only such insects as are of economic importance to the farmer will be discussed in this article.

The Chinch Bug. The chinch bug is the most destructive and the best known of the insects injuring corn. Under favorable conditions it may cause an enormous damage to the crop, and in some cases entire fields may be destroyed. The greatest injury to corn occurs when the fields of small grains have ripened

and the young bugs are forced to migrate to the cornfields where they feed on the outside rows. As these plants are killed they advance farther into the field. Soon after reaching the corn the bugs become full grown, and then fly to all parts of the field to deposit their eggs. The injury from the second brood is not so noticeable, because of the general distribution of the bugs over the entire field.

The chinch bug can be prevented from migrating to the cornfield by the maintenance of a dust barrier between the infested field and the cornfield. The dust barrier is made by plowing a deep lister furrow between the infested and the noninfested fields. The sides and bottoms of this furrow are reduced to a deep fine dust by dragging back and forth a heavy log wrapped with a log chain. After the bugs are trapped in this furrow they may be either burned with a gasoline torch or crushed with a drag. A dust barrier cannot be made effective during wet weather, and under these conditions a road-oil or tar barrier is recommended. The most efficient means of controlling the chinch bug is to burn over in the fall all grass and trash in waste places, roadsides, hedges and other such places, where the great majority of the bugs hibernate.

The Corn-ear Worm. With the exception of the chinch bug, the corn-ear worm is the most injurious insect attacking the corn plant. Every corn grower is familiar with the plump, green-striped caterpillar found in the curl of the ear. The insect is distributed over the entire state, and it is not unusual for from 90 to 100 percent of the ears in the field to be infested. The injury by this pest consists in feeding on the tender curl of the plant and on the silk and forming kernels. The loss due to the actual eating of the grain is considerable, but it is greatly increased by the subsequent growth of molds and fungi on the ear as a result of the earworm infestation. Badly worm-eaten or moldy corn should not be fed to horses, as it sometimes produces a disease known as "blind staggers."

While there is no satisfactory way of absolutely controlling the corn-ear worm, the extent of injury may be greatly reduced by fall plowing and by planting as early as advisable in the spring. At Manhattan the optimum time to plant corn to reduce the amount of corn-ear worm injury to the minimum is about May 1. In southern Kansas the date is about April 20th.

Grasshoppers. Throughout western Kansas the grasshopper is a serious enemy of corn, and it is not unusual for large

areas to be entirely devastated by this pest. The injury consists in the defoliation of the stalk, and often in the entire destruction of the plant. Grasshoppers can be effectively controlled in corn fields by means of the poisoned bran mash. This mash is made according to the following formula:

Bran	20 lbs.
Paris Green	1 lb.
Syrup	2 qts.
Oranges or lemons	3
Water	3½ gals.

In preparing the bran mash, thoroughly mix the bran and Paris green dry in a washtub. Squeeze the juice of the oranges or lemons into the water, and chop the remaining pulp and the peel to fine bits and add them to the water. Dissolve the syrup in the water, and wet the bran and poison with the mixture, stirring at the same time so as to dampen the mash thoroughly.

The damp mash should be sown broadcast in the infested areas early in the morning, or about the time the grasshoppers are beginning to move about from their night's rest. It should be scattered in such a manner as to cover from four to five acres with the amount of bait made by using the quantities of ingredients given in the formula.

The Army Worm. The army worm is a plump, greenish-black caterpillar, having three stripes along each side—the middle one dark and the others light—and a narrow broken stripe of white down the middle of the back. Army worms are most commonly found in grass land or in fields of small grain, especially rye. When they occur in large numbers they may do considerable injury to corn and other crops.

Where the army worms are migrating to the cornfield they may be destroyed by means of poisoned bran mash, discussed as a method of destroying the grasshopper.

This bran mash should be sown broadcast just ahead of the worms. The best time to scatter it is in the evening, about the time when the worms are becoming active. The migrating worms may be destroyed by surrounding the field with a dust barrier and dragging a heavy log through this barrier.

The Corn-root Louse. The corn-root louse is a small bluish-green insect found on the roots of corn, and usually attended by small brownish ants. This insect is becoming a serious pest in Kansas and has caused a large amount of damage during the past few years. The injury consists of the weakening

of the plant, causing it to make little or no growth and to turn yellow.

The corn-root louse is dependent on the small brown ants, which care for them at all seasons. During the winter the eggs are taken care of by the ants, and when the eggs hatch in the spring the ants carry the young lice to the roots of the corn. During the summer the ants continue their care over the lice.

The corn-root louse may be controlled by late fall plowing, which destroys the nests of the attendant ants, or by rotation. Where these insects are present corn should not be grown for more than two years in succession on the same land.

The Corn-root Worm. The corn-root worm is a small white larva, about one-half inch in length when full grown. It feeds upon the interior of the corn roots, boring holes throughout the length of the larger roots, and practically destroys their usefulness. Corn infested by this pest is very likely to have an unthrifty appearance and may go down badly. This insect can be successfully controlled by rotation of crops.

The Maize Billbug. The maize billbug has become a serious pest along the river valleys throughout south-central Kansas. The adult beetles are black in color and about three-fifths of an inch in length. They deposit their eggs in the corn stalks, and the young worms burrow up and down the stalks, causing the plant to have a stunted appearance and often to sucker freely. Stalks injured by the billbug rarely produce ears. The chief means of control is rotation of crops. The billbug does not fly, and consequently is limited in its dispersal. The plowing out of the corn stubs in the fall will destroy a large number of the adults.

Cutworms. There are a number of species of cutworms which feed upon the corn. Ordinarily they do little damage to the crop, but occasionally they become numerous enough to reduce greatly the stand. The cutworms are thick, soft-bodied worms which vary in color from whitish to dark brown or black. They are night feeders, and hide during the day in holes or under clods. In feeding they cut off the plant at the surface of the ground. The moths of the cutworms deposit their eggs mainly in grass land, and one of the chief means of the prevention of injury is not to plant corn on sod land. Where the worms are serious in a field they may be destroyed

by means of the poisoned bran mash as described in the discussion of the grasshopper and the army worm.

White Grubs. The white grub is the larva of the common May beetle, or June bug. It has a thick, fleshy body, and when fully grown is about one and one-half inches in length. The body is curved in a horseshoe shape and is largest at the rear end. The bugs feed on the roots of the corn plant, thus depriving the plant of a part of its normal food supply, checking its growth and causing it to be easily blown over. This insect has not caused any serious damage in Kansas in the past, but it is on the increase, and serious injury may be looked for in the future. The white grub is primarily a grass land insect, and one of the chief measures for preventing injury is to avoid planting corn on sod land. Other means of control are early fall plowing and rotation.

All the insect enemies of corn discussed in this article can be largely controlled by proper handling of the soil and rotation of crops. Fall plowing of the land is very effective in destroying many of these pests, especially the corn-root louse. Where fall plowing is not practical, early spring treatment of the soil is often effective. The corn-root louse and the corn-root worm feed upon the corn plant alone, and therefore a rotation of crops readily controls these pests.

A rotation in which a crop or two of small grain are included is very effective in ridding the soil of insects, provided the ground is plowed soon after the small grain is harvested and is kept in clean condition for the rest of the season. When the ground is kept free from vegetation the insects are forced to migrate to other fields or starve.

OTHER CORN PESTS.

Ground squirrels and other rodents often damage corn by feeding upon the grain before or shortly after it germinates. Ground squirrels dig up the corn and the young plants. One or two squirrels will destroy all the corn on a considerable area. Crows often pull up the young plants in order to feed upon the kernel. Scattering corn, poisoned by soaking it in a solution containing strychnine, where these pests are working, is an effective way of getting rid of them. Care should be taken to prevent hogs or poultry from finding the poisoned grain.

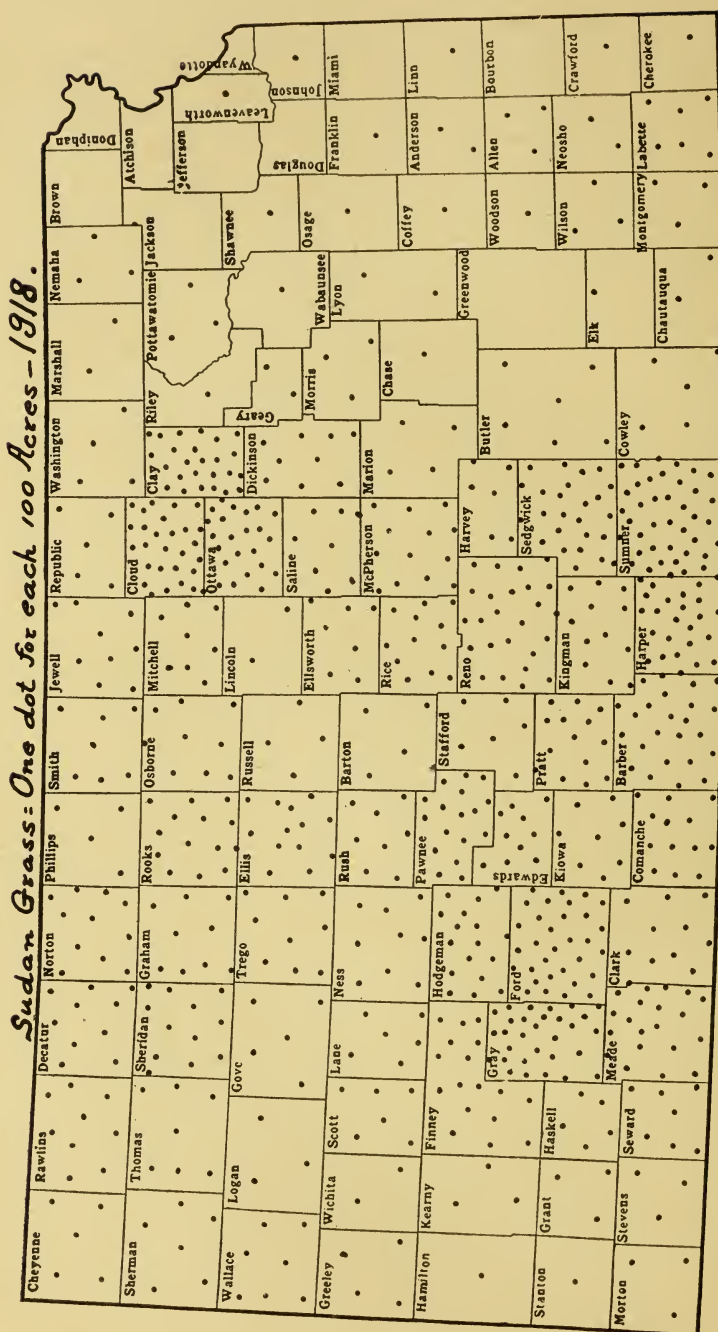


FIG. 121. Distribution of the Sudan grass acreage in Kansas in 1918.

SUDAN GRASS.

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SUDAN grass needs no description since it is now being grown in nearly every county of the state. It was introduced by the U. S. Department of Agriculture in 1909 and sprang into immediate popularity. Kansas is now growing approximately 30,000 acres of it annually, distributed as indicated in the accompanying map (Fig. 121).

In eastern Kansas Sudan grass is most useful as an emergency hay crop. Like sorgo and millet it can be planted any time from May 15 to July 15 on land where corn, kafir, or small grain crops have failed. It is useful to supplement but not to replace alfalfa, clover, and cowpeas, where these crops are now successfully grown. Farther west in Kansas, where it is too dry on the uplands for alfalfa, clover, timothy, or the annual legumes, the only dependable hay crops are Sudan grass, sweet sorghum, and millet. Of these three Sudan grass produces the best quality of hay and is equally sure of making a crop.

Where care was observed in handling the stock Sudan grass has proved valuable as a summer and fall pasture in all parts of the state. It is not a money crop in the ordinary meaning of that term, except when grown for seed production. It is likely, however, that if well cured and baled, a fair price could be obtained for Sudan-grass hay on any of the western hay markets. Kansas farmers may eventually find it profitable to grow considerable acreages for the Kansas City market.

Sudan grass when nearly mature makes good silage, but it is not recommended for that purpose because the sorghums and corn yield more, and because Sudan grass can be cured with little difficulty and fed effectively as hay.

When drilled or broadcasted Sudan grass yields more hay than millet and but little less than sweet sorghum. At Manhattan, Kansas, the average yield per acre for the two years 1914 and 1915 for Sudan grass was 4 tons, Kansas Orange sorgo 4 tons, and German millet 2.8 tons. At Hays, Kansas, for the five-year period 1914 to 1918 the yield for Sudan grass

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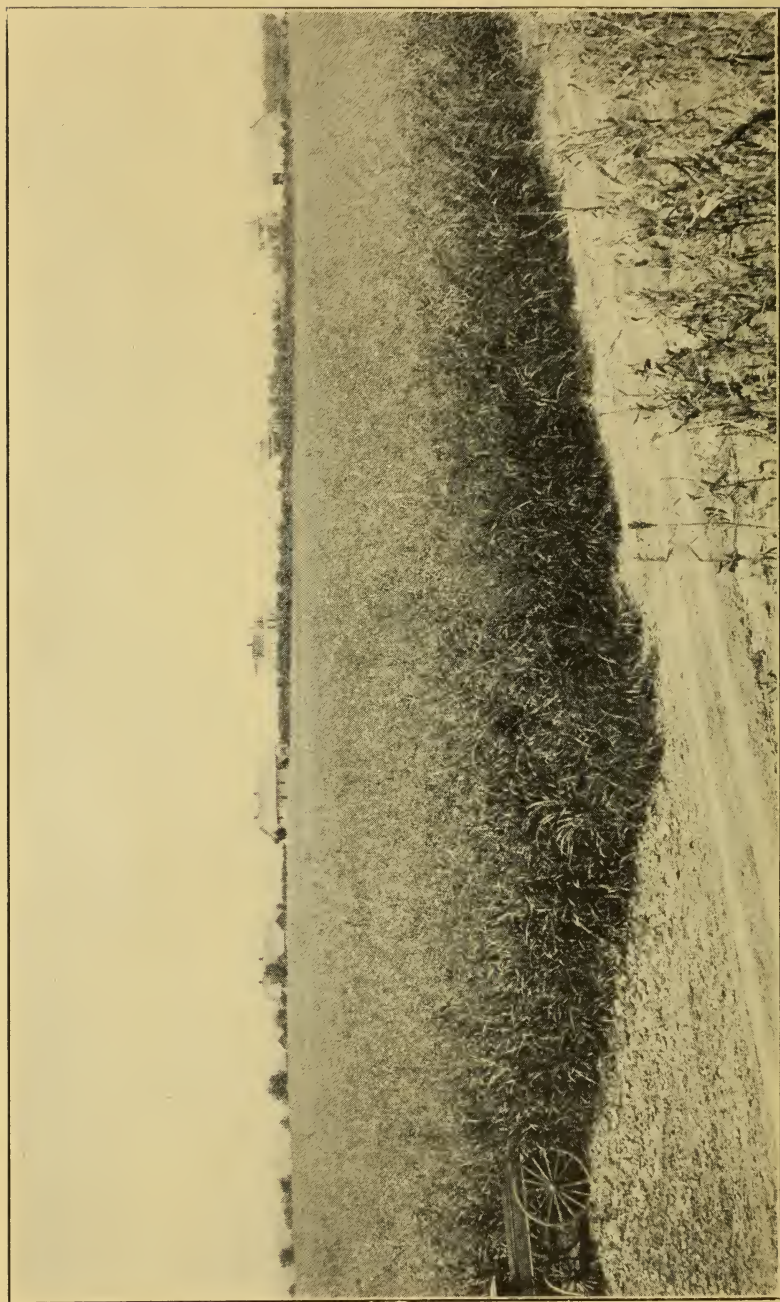


FIG. 122. A field of Sudan grass at the Fort Hays Experiment Station, April 9. Station buildings in the background.

was 2.8 tons, Red Amber sorgo 3.7 tons, and German millet 2.3 tons per acre.

Sudan grass in the plantings at Hays, Kansas, was ready for cutting in an average of 74 days from the date of planting. Red Amber sorgo in 105 days, and German millet in 68 days. In comparison with the sorgo, Sudan grass makes up for its lighter yield by reason of its being finer stemmed and easier to handle and because it is ready to cut sooner. Considered from almost any angle Sudan grass is preferable to millet. The latter requires a few days less for maturity, but it makes a lower yield and Sudan grass hay is of better quality and safer to feed to horses than millet hay.

For hay or pasture close-drilled seedings are recommended for at least the eastern two-thirds of Kansas if the price of seed is not too high. This method saves cultivation, yields finer and cleaner hay, and permits the use of ordinary haying machinery. Rows 36 to 44 inches apart, to be cultivated like corn or sorghum, are preferred by some farmers in the western third of Kansas, because of the greater certainty of a crop under drought conditions. Row plantings are more desirable for seed production anywhere in the state.

In preparing his land and seeding Sudan grass the farmer should ordinarily follow the methods best suited to sorghum in his locality, but better stands are usually obtained from surface planting than from listing, because the listed furrows are often filled up by dashing rains and the seed buried so deeply that the seedling cannot come through. For surface planting in rows the ground should be plowed and put in good condition with a drag harrow, after which the seed can be planted with an ordinary corn planter fitted with sorghum plates, or with a grain drill by stopping up the required number of feeds so that the distance between drills will be sufficient to permit the operation of cultivators.

When seeding broadcast or in close drills the ground is prepared for seeding in the same way that it is for surface planting in rows. Sudan-grass seed, when well cleaned, can be seeded in an ordinary grain drill without inconvenience, and this method usually insures a better stand than where the seed is broadcasted and covered with a disk or drag harrow.

The period suited to the seeding of Sudan grass is the same as for the earliest-maturing sorghums. From seedlings made

under favorable soil conditions, any time between May 1 and June 30, good yields may be expected. The best time is usually between May 15 and June 15. Earlier seedings give poor stands because of the cold soil and those made later than June 30 rarely encounter favorable conditions during the growing season, except in wet years like 1915. It usually pays to wait until May 15, unless especially favorable conditions come earlier. Sudan grass should be sown as soon after May 15 as soil and climatic conditions are favorable, but it is better to wait until June 1 or 15 if conditions are not favorable during May.

The amount of seed necessary varies with the rainfall. Broadcast or close-drilled seedings in western Kansas should be made at the rate of 15 to 20 pounds, and in eastern Kansas at 20 to 25 pounds, of good germinable seed to the acre. For planting in rows 36 to 44 inches apart, 2 to 4 pounds in the western part, and 4 to 6 pounds in eastern Kansas, are the proper amounts of seed either for seed or hay purposes. A thick stand of plants in the row is conducive to a more uniform maturity. The amount of seed sown should be increased if it does not germinate above 90 percent, or if the soil is not in first-class condition.

A wheat drill set to sow two pecks of wheat to the acre will ordinarily sow about 20 to 25 pounds of Sudan-grass seed. Where it is desired to sow a less amount it can be accomplished by stopping alternate holes in the drill or by mixing the Sudan-grass seed with bran or some other mill feed in any proportion necessary.

The hope for large profits from seed production led to the first extensive plantings of Sudan grass in Kansas in 1914 and to a much larger acreage in 1915. Since then interest in seed production has become secondary, as it has not been uniformly profitable. Yields have rarely exceeded 500 pounds to the acre and the average for the state is about 150 pounds. It can be seen, therefore, that Sudan-grass seed is not a good money-crop, except under the most favorable conditions. Much of the acreage grown for seed has in the past been located in the western part of the state. Seed crops in eastern Kansas are successful enough to warrant farmers planting more Sudan grass for that purpose, especially in those counties where grass seed is already an important crop.

Fields intended for seed production should always be planted

in rows and cultivated as described previously. Planted thus they can be harvested with a corn binder, or with a grain binder if the growth is not too heavy. Promptness in cutting the crop as soon as ripe is important, as high winds may shatter out the seed. Sudan-grass seed can be threshed with an ordinary grain separator if care is used to regulate the air-blast so that the lighter seed will not be blown into the straw pile. Good seed weighs forty pounds to the bushel when well cleaned, and it keeps well in storage, showing less tendency to heat than the ordinary sorghums.



FIG. 123. Sudan grass seven feet tall and ready to cut on July 28; near Dodge City, Kan.

Threshed Sudan grass is a good roughage and can be used as a hay, thus adding considerable to the value of the seed crop. Those who plant fields of Sudan grass for the production of seed should remember that Sudan grass crosses very readily with the sorghums. It is necessary, therefore, to see that the field is located at considerable distance, at least one-fourth mile, from any sorghums. Continued crossing with sorghum causes deterioration in the quality of the Sudan-grass hay by making it coarser. The field should be rogued for the first year or two until a pure and uniform strain of seed is obtained. Present indications are that good germinable seed of Sudan grass will continue to sell at ten to twelve cents a pound retail, and should net the grower at least eight cents a pound.

Because Sudan grass renews its growth promptly after cutting and yields a second crop in favorable seasons, farmers often make the mistake of cutting the first crop too soon. Nothing is gained by making the first cutting of Sudan grass before it has headed. When standing in the field the growth appears to be almost as heavy before heading as after it is fully headed, but the percentage of moisture in the younger plants is much higher and the loss in curing is so great that the advantage of a second cutting may be lost.

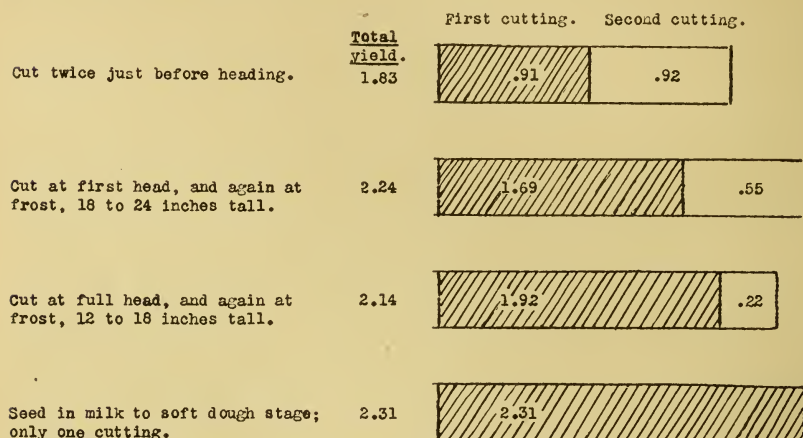


FIG. 124. Diagram showing average annual yields of Sudan grass hay cut at different stages of growth, 1915-1918, inclusive.

At the Fort Hays Experiment Station the following yields of cured hay were obtained as an average of four years, 1915 to 1918, inclusive:

	Tons per acre.
Cut before heading.....	1.83
Cut as first heads appeared.....	2.24
Cut when in full head.....	2.14
Cut when seed was in milk.....	2.31

The relation of the first and second cutting to the total yield, obtained by cutting at different stages of maturity, is illustrated in Fig. 124.

The yield of 2.31 tons per acre from Sudan grass cut when the seed was in milk stage was obtained from only one cutting each year, the other yields were from two cuttings, except in 1918. Chemical analyses of the hay obtained from cutting Sudan grass at these different stages of maturity indicate that the highest yields per acre of protein and fat, considering the

entire season, were obtained when the first cutting was made just as the grass began to head. Whether the second growth shall be cut for hay or used as pasture depends largely on the weather conditions. Pasturing is usually the more profitable, unless the late-summer rainfall is abundant and the fall growth promises to get at least 2 or 3 feet tall before it is killed by frost.

Since the feeding value of Sudan grass does not decrease very much between the time it begins to head and the time it reaches full maturity, other factors may well be considered by

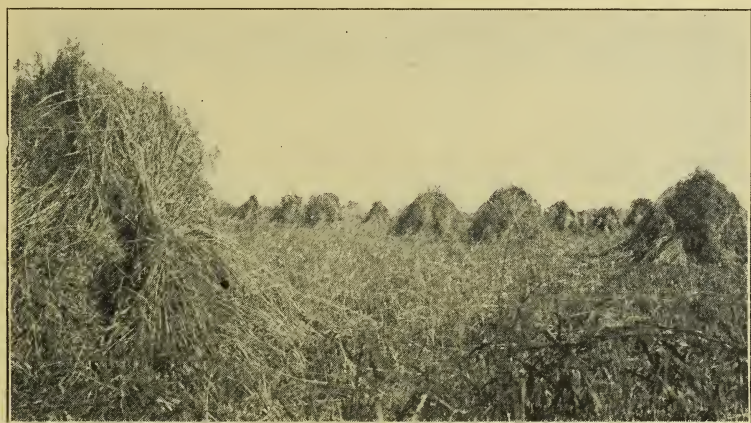


FIG. 125. Sudan grass in shock after being harvested. When planted in rows it is easily harvested with either row or grain binder.

the farmer in deciding when to cut. If feed is scarce it may be best to cut early. If drouth or grasshoppers are injuring the crop before it reaches the proper stage of maturity it should be cut. A rush of other work may sometimes warrant a delay in cutting.

Hay of Sudan grass is similar in composition and value to that of millet, timothy or sorghum hay. Cattle, horses, and sheep eat the hay greedily and there is very little waste in feeding when it has been well cured. Sudan-grass hay is especially valuable for feeding work horses. It is said that horses and mules in western Kansas stand plowing and other hard work in the hot summer months much better when fed Sudan grass hay than when alfalfa is used for their hay ration.

The value of Sudan-grass hay in wintering idle work stock

was tested at the Fort Hays experiment station in the winter of 1914-15. The horses and mules were taken from a normal grain ration when work ceased and placed on a ration consisting wholly of roughness. One lot, consisting of four horses and two mules, was fed 20 pounds of Sudan-grass hay per head daily, a second lot consisting of the same number of animals of each kind received a like ration of alfalfa hay, and a similar number of horses and mules were fed 20 pounds each of kafir stover daily. At the end of 50 days the lot fed alfalfa hay showed an average gain of 5 pounds per animal, the lot fed Sudan-grass hay had lost an average of 8 pounds each, and those fed kafir stover had decreased in weight 50 pounds a head. All three lots lost weight rapidly for the first 15 or 20 days after the grain ration was stopped, but those fed alfalfa and Sudan grass both overcame this loss in the next month.

Sudan-grass hay has also been found efficient as roughness in carrying stock cattle over winter. When it is fed with a small supplementary ration of silage and linseed or cottonseed meal steady gains in weight can be obtained during the winter at a very reasonable cost.

For milk cows Sudan-grass hay is slightly less efficient than alfalfa if fed with a supplementary ration of silage and grain, according to a test carried on at the experiment station at Manhattan, Kansas. Cows fed on Sudan-grass hay with the above supplementary ration, produced 97 percent as much milk as when fed alfalfa hay in place of the Sudan grass.

Each year more and more farmers are using Sudan grass as a summer pasture with good results. At certain stages of its growth the plant is known to contain prussic acid, a deadly poison which in the sorghums has often caused the death of cattle. Very few losses arising from the use of Sudan grass as a pasture have been reported, but care should be used when cattle are first turned into a Sudan-grass field.

Sudan grass is essentially a summer pasture and it will support a larger number of cattle or hogs during the hot weather of summer than any other grass available to the Kansas farmer. At Dodge City, Kansas, in 1914, the substation carried out a pasture test with milk cows. Three acres kept an average of 20 cows in good condition for 32 days during the drought and furnished pasture equal to 375 days' grazing for one animal. The cows when changed from native prairie pas-

tures to Sudan grass showed a gain of 3.2 pounds of milk per day.

The Arizona experiment station found under dry-farm conditions near Prescott, Ariz., that Sudan grass would maintain 20 sheep per acre continuously for 100 days. Compared with Amber sorgo, it was noted that sheep pastured on Sudan grass fattened, while those on the sorgo made only ordinary growth.

A farmer in southwestern Kansas kept 100 head of shotes



FIG. 126. Bundles showing actual growth of Sudan grass cut 2, 4, 6, 8 and 10 weeks after planting. Fort Hays Experiment Station.

growing rapidly on a half grain ration, by allowing them to pasture on three acres of Sudan grass during the summer of 1914, and Mr. B. L. Morris of Lubbock, Tex., pastured 32 hogs and an equal number of pigs and two milk cows on five acres of Sudan grass "from May 1 until fall," in 1915. The grass grew so rapidly that Mr. Morris was compelled to turn in eight head of cattle every few days to eat it down. He claims that in four days after placing his milk cows on the Sudan grass they nearly doubled their output of milk.

These experiences of farmers and the results obtained at experiment stations indicate that Sudan grass can be utilized very effectively as a pasture for hogs, sheep, cattle, and horses. Care and good judgment in pasturing will do much to prevent injuries from poisoning. Young Sudan grass which has been stunted by drouth, or by a hard freeze, should be pastured very cautiously, except with hogs. A normal continuous growth is usually safe for any kind of animal.

About the only troublesome disease of Sudan grass is the red-spot, or sorghum blight, a bacterial disease resembling rust in its effect on the plant. It is caused by a bacteria, *Bacillus sorghi*, and is destructive only where the humidity and temperature are both high. This disease prevents the grass from becoming valuable in Florida, and in fact all along the Gulf coast, but not usually very troublesome in Kansas. When the disease is abundant the grass goes down like wheat or oats that have been attacked with the black rust.

The ordinary grain smut of the sorghums sometimes attacks Sudan grass, but this can be prevented by treatment of the seed with formalin or hot water before planting. Even when present smut does not decrease the value of the hay crop.

The chinch bug and the grasshopper are both quite fond of Sudan grass and either will do the crop considerable injury if they are abundant.

Chinch bugs are best controlled by destroying their winter shelter. Weeds and trash along fences and bunch grass in roadways and fields should be burned in the late winter or early spring if this crop pest is to be held in check.

When grasshoppers become numerous in any community they usually attack Sudan grass as readily as corn. Scattering poisoned bran about the field is the most effective method of controlling grasshoppers.

The standard of intelligence of the people on the farm in any country is directly related to the income derived from farming as compared with that derived from other occupations. If farming is allowed to become unprofitable in comparison with other occupations, the business will be given over to less efficient persons than are now on the farm. Everyone, whether in the country or in the city, is interested in having the American farm yield an income large enough to keep on the farm a fair share of the best people born there.—*The Essentials of Agriculture, Waters.*

BARLEY IN KANSAS.

By S. C. SALMON, professor of crops, Kansas State Agricultural College.

IN acreage and total production barley is one of the minor cereals in Kansas. The average production is only about one-eighth that of oats and about one-sixteenth that of wheat. Nevertheless, it has an important place in the agriculture of the state and there is good reason to believe that it could be grown more extensively. This especially is true for the north-western corner of the state, where corn seldom gives good yields and where barley is generally recognized as the safest small grain that can be sown in the spring. In eastern Kansas barley is often seriously damaged by chinch bugs—more so, perhaps, than is other grains. Partly because of this fact barley is seldom grown in eastern Kansas. Nevertheless there are many farms where a small acreage would be profitable, especially to supplement corn, where the latter is an uncertain crop and it is necessary to have a fattening feed for hogs. For such conditions ten to twenty acres of barley will almost always increase the profits of the farm.

Barley is better adapted to dry land conditions than either oats or spring wheat, and it is one of the best small grains for irrigation. The principal barley-producing area in Kansas is in the northwest corner of the state. (Fig. 127.) In this area it will yield considerably more than oats or spring wheat, but not as much as winter wheat. A common practice is to seed barley on fields in which winter wheat could not be sown, failed to germinate, or was winter killed. For this purpose it is better than any other kind of spring grain.

Barley contains more protein and less fat than corn. Pound for pound it is better than corn for young stock, but not quite so good for fattening. In experimental feeding tests it has given nearly as good results as corn when fed with legume hay for a fattening ration. For horses it is not as good as oats. In northern Europe, where corn cannot be grown, barley is extensively used for feeding hogs and is especially prized for the fine quality of pork, especially bacon, that it produces. It should be cracked or rolled before feeding, but should not be ground fine, as it makes a pasty mass in the mouths of animals and they will eat less and make smaller gains.

Barley is used for pasture in some states and in others is

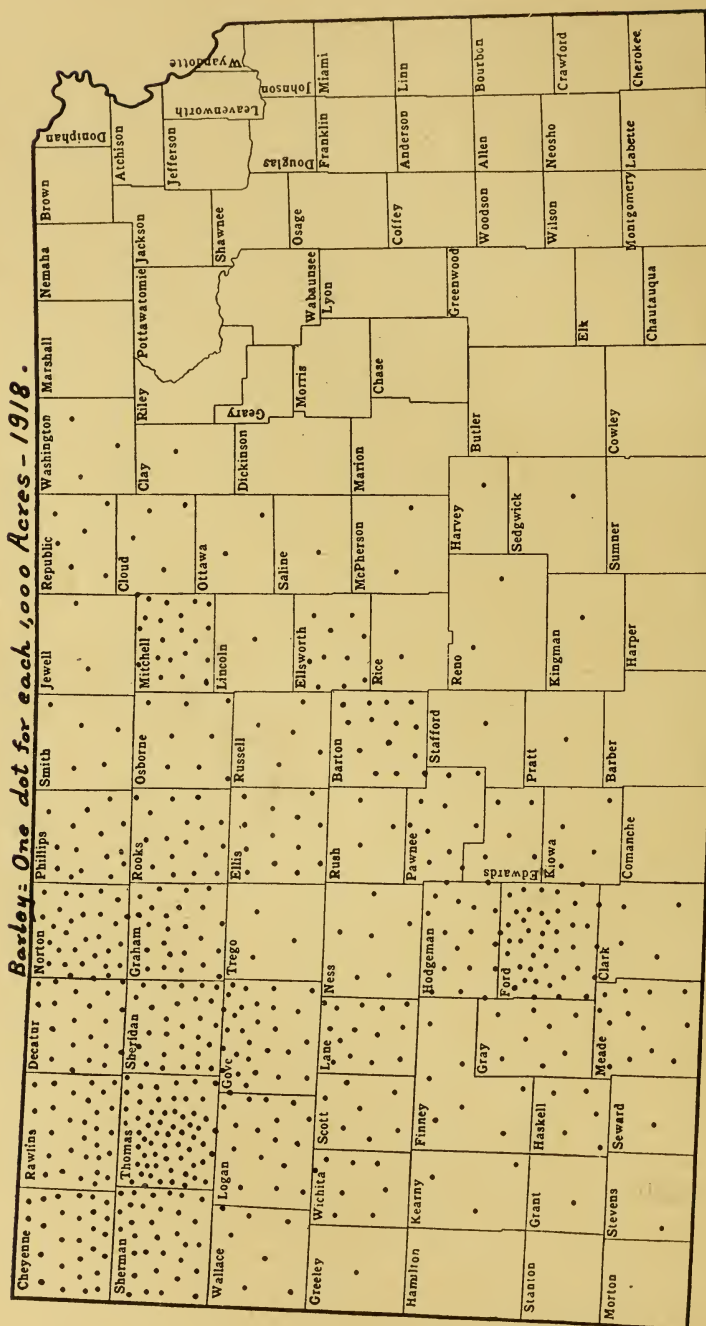


Fig. 127. Distribution of the barley acreage in Kansas in 1918.

“hogged off.” Neither practice is followed in Kansas, and generally cannot be recommended. Rye makes a more rapid growth and will prove more satisfactory for pasture. The beards of the common varieties of barley are so stiff and dry in the Kansas climate that hogs do not take to the crop readily if turned in to harvest it when ripe. A better plan is to harvest, thresh and grind the grain before feeding.

There are many different kinds of barley. The common six-row varieties, represented by Odessa, Manchuria, Oderbrucker, and Coast, invariably prove the best in Kansas. Two-row varieties, such as grow in the drier portions of the Dakotas and Montana, are occasionally tried, but nearly always yield less than those mentioned above. Hull-less barley is frequently mentioned because of the absence of beards and hulls. Unfortunately no variety has so far been found which will produce more than half or two-thirds as much as the common bearded varieties.

The ground for barley should be prepared the same as for oats. Disked corn ground makes a good seed bed if the corn has been well tended. If very weedy, fall plowing or shallow, early-spring plowing is better. As for other grains, a firm seed bed, which can be secured by disking and harrowing, is desirable.

Barley should be sown reasonably early in the spring. Because of rapid growth it may be sown later than oats, but better results will be secured usually if sown at the most favorable date for seeding oats.

From five pecks to two bushels is the best rate to seed. In northwestern Kansas, where most of the Kansas crop is raised, five to six pecks is sufficient. In eastern Kansas, two bushels is not too much.

The best and cheapest seed for Kansas is usually obtained from northwestern Kansas and eastern Colorado. This is an uncertain source, however, because of frequent crop failures. Also, the quality is sometimes poor, as a result of drouth. The varieties generally grown in Iowa, Nebraska and South Dakota usually prove satisfactory in Kansas. While it is better and cheaper to obtain seed as near one's own locality as possible, good seed from these states will usually prove satisfactory.

POINTERS IN POTATO PRODUCTION.

By B. H. PUGH, farmer, Topeka.

THE potato crop in Kansas does not have the wide range of adaptability enjoyed by the grain and forage crops. It thrives only in a special kind of soil and refuses to yield up to its measure unless humored in this respect. A light- to medium-sandy loam is about as near as we can describe its favorite soil, though there are many bodies of loam in the state, apparently suited to the potato crop, which completely fail to produce successful returns. The proper environments will have to be left to the crop itself, and it may be depended upon to show quickly its like or dislike of locality. Certain valleys having a deep, medium-sandy loam, seem especially to suit its taste. Some other places have been found to produce at least fair results, while the greater part of the state cannot be expected to produce anything like a profitable crop of potatoes, no matter how intelligent be the culture followed.

Only a few days ago a well-known farmer, a large operator in the Arkansas valley, made the statement to the writer that he could grow heavy crops of alfalfa, fine yields of wheat, an immense tonnage of sugar beets, per acre, but could never get even fair results with potatoes, though he had repeatedly tried them, using all possible pains with the crop. He said he took special pains and pride in producing unusual yields of his various crops for the pleasure there was in it, but after trying potatoes he had gone back to growing wheat for the "dough" there was in it.

This is illustrative of the fact that potatoes cannot be grown profitably save in a soil suitable to this discriminating plant, and under weather conditions that will assist in its desire for quick maturity. There is scarcely any other staple crop that can be planted the first of April, and be ready at the first of July to return a cash dividend. But in order to deliver this very desirable dividend it must be given the soil and weather it likes best.

Climatically western Kansas should be well suited to potato growing. Colorado, with a little higher altitude, produces tremendous crops of fine tubers. However in actual practice the semi-arid condition of western counties, and the resultant hot weather and frequent winds, place a ban on the profitable growing of potatoes there. Nevertheless certain localities

favorably located for watering by irrigation may discover a way to develop this business.

Only repeated effort and much patience of a common-sense nature will prove out new localities suited to potato growing. It is the experimenter with "excelsior" written on his banner who leads the way for new and better things, and almost every community has one or more of these invaluable citizens.

The efforts of experimenters along with the assistance of our rapidly-developing county agent plan, may be depended on to show where the crop may be profitably grown. In the meantime we can remember that Kansas is blessed with a climate and soil that will produce such a profusion of grains and forage crops that the facilities of many large railways are taxed to haul the product to market, and her widespread pastures support such vast herds that one of the largest livestock markets in the world has been built up at the mouth of the Kaw; so there is no reason for discouragement if one's land happens to prove unsuited to the growing of the mealy tuber.

The valley of the Kaw river, reaching from Manhattan to Kansas City, is the best known and probably the best suited to potato growing of any in the state. The writer's experience has been confined almost wholly to the Kaw valley and the methods of growing potatoes as followed there, will, I believe, represent a fairly consistent practice for points outside this valley. The methods for producing the best results are simple but imperative. There are no tricks or inside information associated with the business, only the employment of common sense, the same as anyone would use in the thorough cultivation of any staple crop.

Only the early varieties of potatoes may be depended on for Kansas, for the reason that potatoes, unlike corn, delight in cool weather, and must make their growth in the moist, cool weather of spring, and be merging into maturity by the time the usual drouth of early summer begins. Occasionally we have a dry spring that reduces the yield of the crop even as much as 50 percent, but in 24 years of growing I have not witnessed a complete failure of potatoes.

The late varieties, such as Burbanks, Rural New Yorkers, Carman, etc., are planted later and must do their growing during the heat of summer, which, along with the customary dry spell of summer, usually proves fatal to success. Roughly speaking, late varieties will fail four years out of five; while

early varieties will prove profitable four years out of five, and allow the grower to break even the rest of the time. .

After trying some thirty different varieties, the writer has settled down to the use of only two kinds as suitable for conditions as we have them in Kansas; the Early Ohio for the richer or heavier loams, and the Irish Cobbler for sandy soils. The Cobbler is a handsome white potato, one of a family of fifteen similar kinds, which are offshoots of the Pearl, a large white potato grown in the north and west and possessing great vitality. Along the Kansas river there are frequently considerable tracts of quite sandy land. These fields are especially well adapted to the Cobbler potato, and if well manured will produce surprising crops of potatoes of fine quality and color. It will be of no avail to plant this potato on thin or exhausted sandy loam, for disappointment is sure to follow. Under favorable conditions, on well-manured, sandy land, it will easily produce 200 bushels per acre, and may reach 300. The shipping market will pay about 5 cents per bushel premium for the Cobbler, owing to its clean, white skin.

The Early Ohio potato was introduced by a Massachusetts seedsman over thirty years ago, and is by far the most widely grown of all early potatoes. It has been termed the "most popular potato ever produced," and may be successfully grown in any state adapted to early potatoes. It is found as far south as Louisiana, and is a favorite in the northern part of Canada. But the place where it comes nearest to reaching perfection is the famous Red River valley, lying partly in Minnesota and partly in North Dakota. From this valley comes the seed from which most of the central and southern states grow their potato crops.

This northern seed, coming to maturity just in time to avoid fall frosts, is full of vigor and unexcelled for seed purposes. It is especially good for table use also, being of fine flavor. It may be boiled, fried, mashed, or baked, with the best of results. This applies more aptly to the northern potato, for the Early Ohio potato grown in Kansas does not possess quite the qualities attributed to its kin from the north. At the immediate maturity of the Kansas potato, and for a few weeks following, it is at its best. It then begins to deteriorate, and loses rapidly both in appearance and cooking quality. This is of necessity true not only in Kansas, but in all states to the south, because

of the hot soil in which the potatoes must be left till ready for use or sale.

The object of this paper is not so much to go into the minute details of soil preparation and successive steps in the culture of the crop, as to emphasize, earnestly, those points which go farthest toward successful potato growing. If the salient features are not understood and accurately followed, all the detail in the world will lead only to further expense without due reward.

Deep plowing is highly important and cannot be easily overdone. Ten inches is not too deep, and deeper plowing is better if the soil is rich enough to stand it. The potato plant—tuber,



FIG. 128. The usual method is to plant potatoes with a two-horse automatic planter.

roots, and all—thrives best in a mellow, deep soil. If wet weather prevails the deep plowing drains off surplus water; if dry weather, the mellow soil supplies the plants with moisture.

In the island of Jersey, from whence came our Jersey cows, potato culture reaches its highest state of perfection. The soil is plowed from twelve to eighteen inches deep, with specially made plows drawn by five or six heavy horses.

Last season, in the rush of spring work, I had one field plowed with a tractor. The plowing was not deep enough and the plants showed the effect of it the whole season through. No amount of surface tilth or subsequent cultivation could rectify the mistake. The average tractor will not plow deep enough for potatoes, unless some of the plows are removed. It

is a matter of mystery why tractor makers content themselves with clumsy machines driven by a small-bore motor, with scarcely more than enough power to propel the empty tractor. If a 400-horsepower motor can be placed in the fragile framework of an airplane, surely there is some way to produce a reasonably powerful tractor without tons of metal to drag about the fields. We look hopefully into the future to the time when some genius will build a tractor that will really and effectively take the place of horses, but for the present, I would say, "Keep on raising horses."

Potato growing is intensive agriculture, whether on a large or small scale, and if done in a haphazard fashion the work will fail. Deep plowing is an important milepost on the way toward success.

After plowing and before the soil has time to dry, float it down level. This will prevent clods forming and holds moisture nicely. When ready to plant harrow the fields with a spike-tooth harrow having the teeth set nearly straight, in order to pulverize the clods beneath the surface. Follow the harrow with the float once more, after which planting may proceed. There is nothing the potato plant likes better than mellow, well pulverized soil, and it always pays to give the plant what it wants.

A venerable and well-known congressman gives the following advice: "When you start out to make a rabbit pie, first get the rabbits." Same way with potato growing. If you are in earnest about securing a good crop of tubers, first get the seed—good, northern-grown seed. Lay aside the brilliant and seducing seed catalogues which begin to make the spring blossom before the snows are yet gone. They will tickle your fancy with whole-page cuts of potatoes lying a foot deep on freshly dug fields, while the proprietor of the seed house holds up a random plant that has a peck of potatoes clinging to the roots. These houses are all putting out so-called new varieties and in the fervid pages of their catalogues the yield runs up from 500 to 1,000 bushels per acre. This is too much of a yield for the average grower to stand. So it would be well to avoid the bluishments of the seedsmen and select some tried variety that is associated with more potato and less rhetoric.

Insist on securing northern Early Ohio or Cobbler seed, according as your soil is sandy or a heavier loam, and let it be

remembered that it is a waste of time and land to plant native Kansas potatoes. This is well understood by the large growers throughout the valley, who never plant native seed, but always purchase seed from the Red River valley.

One of the essentials in potato growing, possibly the chief essential, is soil fertility. Seed selection is important, but fertility is, if anything, more important. If our agricultural papers could inspire the farmer to improve the fertility of his acres with as much eagerness as he selects and improves his seed corn, the results would be startling. Fertility is even more important to the potato, because it is a more expensive crop. It cannot thrive on a soil barren of fertility any more than cattle can thrive on a pasture barren of grass.

The potato plant is a gross feeder. Its root system develops so rapidly that by the time the plant is six inches high the rootlets are meeting across the rows. If fertility is placed within reach, the plant is sure to make quick and vigorous response.

No fertilizer compares with common barnyard manure in ability to produce substantial crops of potatoes. After experimenting with cottonseed meal and other kinds of commercial fertilizers, using as much as a carload of this goods, the writer has returned to barnyard manure as the most effective of all, and the most lasting. It should be used liberally, ten to fifteen tons per acre—more if convenient. It may be depended upon to produce fine crops for three years and longer, if it is supplemented with crops of green rye planted after potato harvest and plowed under in the late fall or early spring. The persistent use of rye as a green manure crop for potatoes cannot be emphasized too much. It is the cheapest and most vigorous of green manures and produces smooth tubers of good quality. The potato is 78 percent water and therefore not hard on the soil. It may be grown successively for many years without change, on the same field, if the rye rotation is used. The writer has one field which in fifteen years has produced fourteen crops of potatoes, the last three averaging 250 bushels per acre.

No fears need be entertained about the manure producing scab, no matter what the neighbors may say. I am fully aware that there are those that insist that potatoes are made scabby by the use of manure; that it did back in Michigan, or Indiana

where they came from; that they know because they saw it with their own eyes. Likewise, there are some who never think of planting potatoes without getting out the almanac to consult the phases of the moon, fearful lest some incautious move be made that would conflict with the moods of this mysterious orb, and that it possesses some sinister influence by which it breathes damnation upon any crop not planted according to its fitful humors. You may safely ignore the phases of the moon in potato culture, but it is not safe to ignore the use of manure, all that can be had of it, no matter whether fresh or composted.

Yield is what the grower is after and the faster the crop grows the larger and smoother the tubers will be. Potato land that will produce 100 bushels per acre under ordinary conditions will easily double in productive ability by the use of this fertilizer. The best seed carefully planted in well prepared land cannot reach large results save in fertile soil, but furnished with this assistance the early potato can produce its crop in an amazingly short time, finishing its growth during the cool nights of spring, and ahead of the summer drouths. On poor soil the crop will drag slowly on, in an effort to produce its crop; finally winding up with a small yield of undersized potatoes, to the loss and disgust of the grower. Making the soil rich is not an expense but an investment, and no matter what the crop, it is certain to yield good returns.

The expense connected with growing the potato crop is considerable, which is an additional reason why the crop should be handled with care and judgment. Good yields, as before mentioned, are essential to profits, and one of the ways to secure yield is through liberal seeding. Years ago growers in Kaw valley were using some ten bushels per acre and thought that plenty. After more experience they planted twelve to fourteen bushels. Now, on good land, veteran growers are using sixteen to eighteen bushels per acre. This appears expensive, but it is a profitable course in the long run. On thin soil ten or twelve bushels are enough, if such a field must be planted. The Early Ohio grows compactly in the hill and will stand close planting. Besides the shading of the soil will save much moisture for the plants. Eighteen bushels will place the seed pieces ten inches apart in the row with rows 34 inches apart.

The common practice in the Kaw valley is to plant potatoes

with a two-horse automatic planter. These planters do excellent work. They are set to plant the seed about three or four inches deep and the covering disks throw up a ridge of earth over the planted seed.

There is a new kind of potato culture coming into practice in a small way, amongst gardeners especially. For those who wish to go the limit in encouraging the productivity of potatoes this method is fascinating and remunerative. This is the sprouting method. It is but slightly known, but coming



FIG. 129. Small seed potatoes sprouted in a warm cellar and planted by hand give exceptionally high yields.

more into notice every year. Though new to the United States, it is really an old method having been used in the Jersey Isles for some 60 years.

Whole potatoes about two inches in diameter are selected and placed in small baskets. The one-third-bushel peach basket is very good. These are set in a warm basement or furnace room for about a month before planting and the temperature kept around 60 to 70 degrees. When the sprouts are about one-half inch long the baskets are set in the sunlight, where they are not in danger of freezing, and the sprouts will stop growing and turn green. They are then ready for planting.

Seed thus sprouted cannot be planted with a planter without injuring or knocking off the sprouts, which would be fatal to

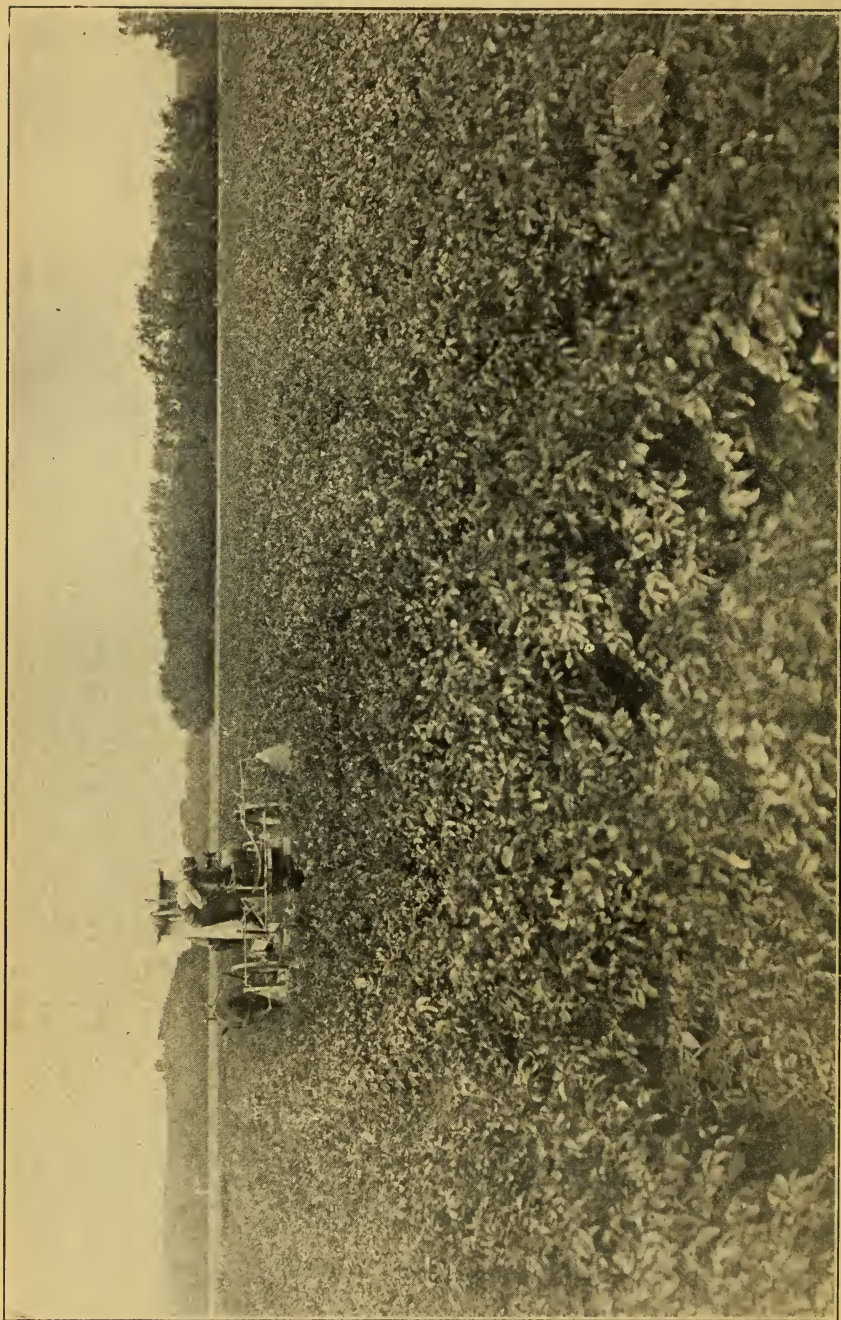


FIG. 130. The Colorado potato beetle is the worst enemy of Kansas potatoes. It is customary to fight them by spraying with a mixture composed of one pound of Paris green, three pounds arsenate lead, and fifty gallons of water.

success. Furrows must be made and the potatoes placed carefully by hand, preferably with the sprout up, so it will get out of the ground sooner. Cover soon as possible to a good depth, with hoe, plow or cultivator, according to the size of plot. Subsequent cultivation may be the same as any general crop of potatoes. By this method potatoes acquire great vigor. They will come through the ground ten days earlier than cut seed planted at the same time and will outgrow them, developing large, sturdy plants and ultimately a fine crop of tubers. The vines will soon cover the ground densely and what cultivation is given them will have to be done rapidly during the early growth of the plant, for the horses will damage the vines walking through them. A field of rich soil planted with potatoes thus sprouted makes an immense growth of vines, and I have never seen the method fail to produce a good yield of tubers.

The above sprouting method is used quite extensively in England and Scotland, but is slow to show popularity in this country, owing to the disposition to plant larger fields here and the larger expense involved in such planting. It requires 25 bushels or more of seed per acre, though the second size can be used and may be purchased at a lower figure than full-sized seed. The planting is more tedious and expensive. In round figures I should place the cost at ten dollars per acre above the expense of ordinary planting. Against this expense the grower may place the increase in yield, which is seldom less than 50 percent above potatoes planted by the usual method. After having tried this plan for five or six years the writer is confident of its usefulness, especially so for a lad or young man who is developing a taste for growing this valuable crop.

In cutting seed for main-crop planting, a few cardinal points are of particular value. Seed pieces of the Early Ohio should be cut not to secure one eye to a piece but to get a piece of good size. Small pieces completely fail to produce plants equal to those from good-sized cuttings.

Plant seed as fast as cut. Allowing the seed to dry after being cut robs it of its vitality, and if left till it becomes partially wilted from drying it is worthless for planting.

Shortly after planting a deeper cultivation should be given, with the cultivator shovels running close to the planted rows. This is colloquially termed "blind plowing." By it air is admitted to the soil and a loose condition established which will allow for the expansion of the tubers as they begin to grow.

When the seed in the ground has developed sprouts about one inch long (dig down to see), level off the rows with a float or a harrow having a 2x4 placed edgewise just in front of the back teeth. The object of this operation is to smooth down the rows, destroy any small weeds starting, allow the warm sun to get closer to the sprouts, and to permit later cultivation to throw some earth toward the rows.

Later cultivation should be made at least once a week, with the shovels set shallow. Deep cultivation cuts the roots. Beginning with the second cultivation a little earth should be thrown toward the plants to cover newly starting leaves. At each succeeding cultivation, as well, a little more earth should be thrown towards the plant, making the ridges each time a little higher. When the plants get so large that further cultivation is unnecessary, the final "laying by" operation should be done with a two-horse cultivator, having large hilling shovels which will throw the earth up to the plants and make a good ridge. Another good plow for this purpose is the one-horse Planet Junior plow, with hilling shovels. These serve well to make a good ridge. This ridging process cannot be too much emphasized as it puts the tubers up out of danger from heavy rains and makes the crop easier to dig.

The spraying of potatoes should begin as soon as the first insects hatch. So far there has been comparatively little spraying for blight in Kansas, as the Kansas climate does not seem to develop this danger to any considerable extent. The Colorado potato beetle is the chief enemy of the crop and close watch must be kept of the fields to find when the larva begin to hatch. There is little use spraying to kill the adult striped beetle, for it does little damage. Some of them appear not to eat at all and exist only to produce the larva from which the greater damage comes. If the larva get a day or two headway, however, they may prove disastrous. If they are not too prevalent, one spraying will answer, although two is usually necessary, and in some instances three sprayings. The different sprayings should be made at intervals of about ten days.

The best poison for insects is composed of a mixture of one pound of Paris green, three pounds of arsenate of lead, and fifty gallons of water. This amount should cover about one and one-half acres of potatoes at one spraying. The arsenate of lead, while only about one-third as virulent as Paris green.

has the faculty of holding the still more poisonous Paris green on the plants—even a heavy rain will not wash all of it off.

The harvesting and selling of the crop is, of course, the largest consideration, and must be handled with as much energy and business-like method as if a herd of livestock were being marketed. Bear in mind always that if you have something good there is certain to be some one who wants it at its value. If your lot of potatoes comes out good, and is sacked tightly, and loaded on the car promptly, using care to avoid sunburn and to keep out culls and dirt, buyers will tumble over each other to get it. It is nonsense to expect commission men or their buyers to accept cars having a considerable percentage of dirt or culls in the sacks. You would n't buy such stuff. Why expect them to buy it?

In digging, Kaw Valley growers use four-horse diggers. They observe three cardinal points in this operation: First, they begin marketing the crop just as soon as it is matured; second, they avoid letting the sun shine on the dug potatoes; third, they leave out small potatoes, trash, and dirt.

Potatoes are perishable, and the Kansas potato deteriorates rapidly. The time to sell it is when it is about mature. The shipping season in Kaw valley lasts about six weeks, beginning July 1, and it will prove unprofitable to attempt to hold out beyond this for higher prices. A percentage of the crop will rot in the ground in a few weeks, besides the grass, which is sure to get in the fields, will make digging a sorry job. Other states with a good-quality product are apt to crowd our native potatoes off the market by the first of September. Hence, our period for marketing is very limited. The only safe plan is to sell as soon as the crop is ready, no matter what the price may be. In regard to price, however, it may be said that Kansas gets the highest average price for her potatoes of any state except Florida.

The average yield of about eighty bushels per acre for potatoes in Kansas is far too low when we consider the fine alluvial valleys within our borders. But this is bound to improve in time. Already our other resources are beginning to count in the nation's prosperity. Our country asked for wheat, that the stricken peoples beyond the Atlantic might be fed, and the fields of Kansas smile with a promise of a crop that would feed well-nigh half of Europe. The country needed beef and pork



FIG. 131. Kaw valley growers use four-horse potato diggers, which elevate the potatoes and lay them on the surface for easy picking.

for shipment, and the packing houses at the end of the state have been almost strangled with the streams of livestock that were poured into their pens. The call went out for men, and this state, true to its instincts of liberty and justice, gathered together its virile young men, sent them with its prayers and blessings into the great war, and they met, vanquished and routed a dastardly foe in some of the worst battles of all history.



FIG. 132. Kaw valley potatoes are dug in high temperature, and it is important that they be sacked and loaded in the cars as quickly as possible.

Kansas is proud of her far-reaching fields and the contented homes that nestle among the hills. She is proud of her unshakeable devotion to law and order and right living, and her freedom from the wastage of industrial strife. She is proud of the rich resources that lie in her soil, in the resources under her soil, and the beneficent climate that brings fruitage to her lands, but most of all she is proud of the men and women who placed her where she is.

FARM SEEDS AND WEEDS.

By H. F. ROBERTS, botanist, Kansas State Agricultural College.

OBTAINING pure seed is an important matter for the farmer, since many of the most noxious weeds may be introduced by the use of impure seed. Weed seeds generally come in with seeds sown rather than through other agencies, until they become established in a neighborhood, when they spread by natural means. Generally speaking, farmers are too ready to lay all of the blame for weed introduction at the door of the seedsmen. While it is true that some seedsmen are careless, and a few unscrupulous, as a general rule, seedsmen are like all other business men. They must depend for their success upon their reputation for fair dealing, and the good quality of their product, and it is to their financial interest to keep the quality of the product as high as the business will afford, in order to build up a superior reputation in a competitive market.

Pure agricultural seed is seed of the ordinary field crops that is true to name, and free from weed seed, trash, and dirt. Reliable seedsmen usually carry a line of what would commonly be called "pure seed" in their best grades; that is, seed that is relatively clean and pure. Their poorer and cheaper grades, however, frequently contain more or less impurities, which occasionally include some of the more important noxious weeds. It is to the interest of the farmer to know the nature of these impurities, so that he can be induced to buy the better grades if possible, or if he cannot afford it, that he may know the nature of the chief weeds and their seeds which come in, either through the cheaper grades of seed, or through careless or improper handling or cleaning.

Farmers as a rule, in buying seed, tend to buy the cheaper grades, either for economy's sake, or from necessity, and it is the cheaper grades of commercial seed which include the weeds. By buying the top grades only, and by dealing with well-established and reputable houses, farmers will usually have less difficulty in securing pure seed. It is also to the farmer's interest to keep the seedmen's business on a high grade basis, by buying, so far as possible, the better grades of agricultural seed, thereby encouraging the handling of only first-class seed.



FIG. 133. SEEDS OF COMMON WEEDS.

- 1, Black Mustard seed, *Brassica nigra* (L.) Koch.
- 2, Chickweed seed, *Cerastium vulgatum* (L.).
- 3, Curled dock seed, *Rumex crispus* (L.).
- 4, Lambs Quarters seed, *Chenopodium album* (L.).
- 5, Field Mallow seed, *Malva rotundifolia* (L.).
- 6, Pigweed seed, *Amaranthus retroflexus* (L.).
- 7, Pigweed seed, *Amaranthus hybridus* (L.).
- 8, Pigweed seed, *Amaranthus blitoides* S. Wats.
- 9, Pigweed seed, *Amaranthus graecisans* (L.).
- 10, Smartweed seed, *Polygonum persicaria* (L.).
- 11, Trefoil seed, *Medicago lupulina* (L.).
- 12, Vervain seed, *Verbena stricta* Vent.
- 13, Vervain seed, *Verbena urticifolia* (L.).
- 14, Wild barley seed, *Hordeum jubatum* (L.).
- 15, Barn-yard grass seed (*Echinochloa crus-galli* (L.) Beauv.
- 16, Dog Fennel seed, *Anthemis cotual* (L.).
- 17, Ground cherry seed, *Physalis longifolia* Nutt.
- 18, Hare's Ear Mustard seed, *Conringia orientalis* (L.) Dumort.
- 19, Spreading panicum seed, *Panicum proliferum* Lam.
- 20, Pepper Grass seed, *Lepidium virginicum* (L.)
- 21, Plantain seed, *Plantago major* (L.)
- 22, Plantain seed, *Plantago aristata* Micx.
- 23, Rush Grass seed, *Juncus tenuis* Willd.
- 24, Shepherd's Purse seed, *Capsella Bursa-pastoris* (L.) Britton.
- 25, Spike Rush purse seed, *Eleocharis paulstirs* (L.) R. and S.
- 26, Yarrow seed, *Achillea millefolium* (L.).
- 27, Foxtail seed, *Chaetochloa glauca* (L.) Scribn.
- 29, Dropseed grass, *sporobolus neglectus*.
- 30, Prickly lettuce, *Lactuca scariola* (L.)

In this state, aside from the cereals, the most important kinds of agricultural seed in the market liable to contamination through weed seeds are alfalfa, Red clover, timothy, Kentucky blue grass, English bluegrass, Sweet clover and Sudan grass. The approximate acreages of these crops is as follows:

Crop.	Acreage.
Alfalfa	1,189,000
Blue-grass	289,000
Timothy	202,000
Clover	168,000
Sudan grass	31,000
Sweet clover	17,000

Of these, by far the most important is alfalfa, with an approximate crop value for the state of \$31,000,000. Other crops, grown in smaller acreages, or only occasionally, include



FIG. 134. A weedy pasture. Sunflowers and rosin weed—principally Snow-on-the-mountain.

meadow fescue, orchard grass, English rye grass, brome grass, red top and White clover.

Taking up the chief crops in their order, we will discuss the principal weeds, the seeds of which are commonly found in seed as offered in the market. In these figures no account is taken of commercial grades, the better grades containing, of course, fewer weed seeds than the poorer.

The results cover the year 1917-18, and the first half of 1918-19, and the results for the whole period are averaged in the following table. The writer is indebted to Mrs. E. P. Har-

ling of the Seed Laboratory of the Kansas State Agricultural Experiment Station for these data:

WEED SPECIES.	Percentage of samples in which seeds of various species of weeds were found.										
	Alfalfa.....	Timothy.....	Blue grass.....	Red clover.....	Alsike and timothy..	Sweet clover.....	Meadow Fescue....	White clover.....	Orchard grass.....	Sudan grass.....	Alsike clover.....
Barley (wild).....			25		19						
Barnyard grass.....	9			100							
Buckhorn.....	8	33	38	58					50		38
Buffalo Bur.....										30	
Canada Thistle.....	26							33			
Catchfly.....								50			63
Cheat.....							100		75	10	
Chickweed (Mouse-ear).....			50		100			67			
Cinquefoil (rough).....		40			100						
Crabgrass.....	13							33		43	
Dandelion.....			38								
Dock (curled).....	11	20	50	56		43	63	33	50		81
Dock (sour).....			65	40	67			33	50		50
Dodder.....	11			10						17	
Dog Fennel.....					100						
Eragrostis.....	7										
Foxtail (green).....	59		25	59		50		33		33	38
Foxtail (yellow).....	11					13				20	
Ground Cherry.....											
Johnson grass.....										30	
Lambs quarters.....	29			30	100	48		33		17	25
Mexican Tea.....											
Mustard (Hare's Ear).....					100						
Mustard (black).....						13					
Nettle (stinging).....			25								
Panicum (spreading).....	11					9					
Peppergrass.....		44	50	10	100	9	86		100		75
Pigweed (rough).....	39			40		20				40	25
Pigweed (troubling).....	16		25								
Plantain (black seeded).....		60		20	100			33			
Plantain (bracted).....		40		32			81		50		38
Ragweed.....						14				67	
Rush grass.....	19		25								
Russian Thistle.....						32					
Sage.....					67						
Sedge.....	8		75		100		18				81
Smart weed.....		33		20			16			22	
Shepherd's Purse.....			50								
Speedwell.....		75									
Spike Rush.....			100								
Sunflower.....						13				67	
Trefoil.....								33			
Vervain.....				10		12					
Witch grass.....	9										
Yarrow.....			25								

The analyses of alfalfa samples showed a fair degree of purity. Averaging the results for 1918-19, it was found that for the whole period an average of 55 percent of the total number of alfalfa samples analyzed (235) contained one percent or more of impurities, while an average of 41 percent contained no impurities. The highest number of different kinds of weed seeds found in any one sample was 19. For the year 1918-19, the total number of kinds of weed seed found in alfalfa was 49, while in the first half of 1918-19 it was 86. In the case

of Red clover, an average of 75 percent of the total number of samples analyzed, contained one percent or more of impurities, while 10 percent had no weed seeds. The highest number of weeds represented in any one sample was 48.

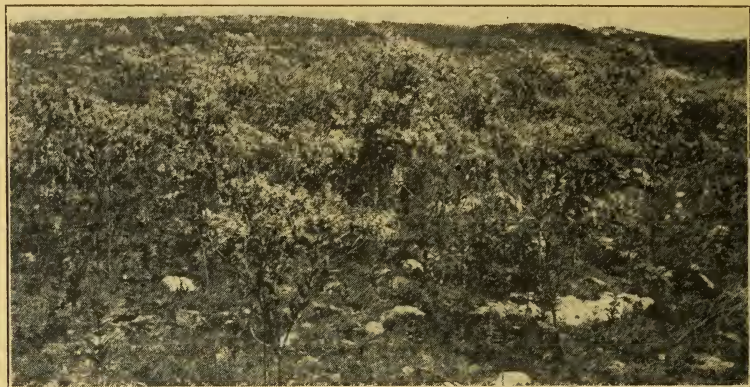


FIG. 135. Stony hillside pasture; grass nearly gone; run to Snow-on-the-mountain and other weeds.

Of the timothy samples analyzed, 27 percent carried one percent or more of impurities. The comparatively small number of samples sent to the laboratory does not afford a fair opportunity for judging the condition of the bluegrass seed in



FIG. 136. Weeds in bottom land; mostly Velvet Leaf.

the market. In the first half of 1918-19 the total number of samples analyzed showed but one percent of impurities, the largest number of weed seeds represented in any sample being 16.

In the case of meadow fescue or English bluegrass, again but a small number of samples were analyzed. All of them contained one percent or more of impurities, the highest number of weeds represented in any one sample being 27. In White clover the situation was the same with regard to purity, and the highest number of weed seeds found in any one sample was 25. In the case of Sudan grass for the year and a half, an average of 80 percent of the samples analyzed contained one percent or more of impurities, while an average of 14 percent contained no weed seeds whatever. The maximum number of weeds represented in any one sample was 22. The other kinds of seed given in the table are of minor importance in this state, and need not be considered. It will be well, however to notice the most important weeds found in the kinds of seed examined.

In alfalfa and Red clover, the worst seeds were buckhorn, Canada thistle, dock, and dodder; in timothy — buckhorn, cinquefoil, dock, and plantain; in White clover—Canada thistle, dock, and plantain; in meadow fescue—cheat, dock, and plantain.

In this connection it is important to note that practically the entire list of really noxious and pernicious weeds are not native to the state or even to America, but have come in from Europe and Asia. The following list illustrates this point, those in capitals being the most dangerous and noxious species.

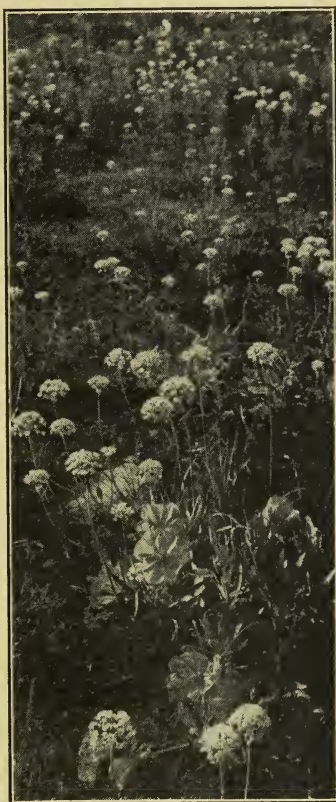


FIG. 137. Wild onion in prairie pasture.

- | | |
|----------------------------------|---|
| 1. BINDWEED, 3 species. | 15. Johnson grass. |
| 2. Black Mustard. | 16. Lamb's Quarters. |
| 3. BUCKHORN. | 17. Mallow. |
| 4. Caltrop. | 18. Penny Cress. |
| 5. CANADA THISTLE. | 19. Pigweed, 2 species, from
tropical America. |
| 6. Carrot. | 20. QUACK GRASS. |
| 7. Charlock. | 21. Rocket. |
| 8. Cheat, 2 species. | 22. RUSSIAN THISTLE. |
| 9. Chickweed. | 23. SOW THISTLE, 2 species. |
| 10. CHICORY. | 24. Smartweed, 2 species. |
| 11. Crab grass. | 25. Trefoil. |
| 12. DOCK, 2 species. | 26. Vervain. |
| 13. DODDER, 2 species, 1 native. | 27. White Mustard. |
| 14. Hedge Mustard. | |

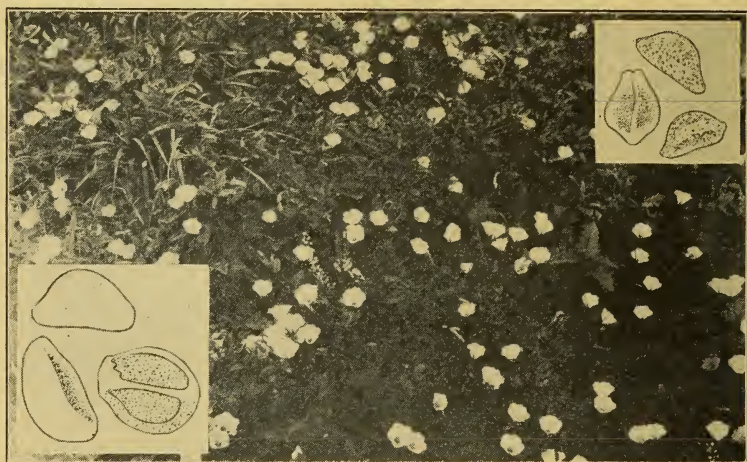


FIG. 138. Field bindweed in bloom. Forms a dense mat over the ground. Seeds of field bindweed, above; seeds of hedge bindweed, left, below. Seeds $\times 4$.

It is not the aim of this article to discuss all weeds occurring in pastures and cultivated lands, but only those which are ordinarily or occasionally found in the most important crop seeds of the state, and which become noxious on the land. In general, only those weeds can be considered noxious which are perennial; that is to say, which live over from season to season by means of roots or other underground parts. There are, however, occasional annual weeds, like the foxtails and crab grass, which become very troublesome, especially in run-down alfalfa fields. Wild mustard in oats or other spring grains is a troublesome annual weed on account of the large number of seeds that it forms. Dodder is always a pest.

To the weeds in the above list is appended a secondary list, as follows, comprising all the other weeds found in the seed

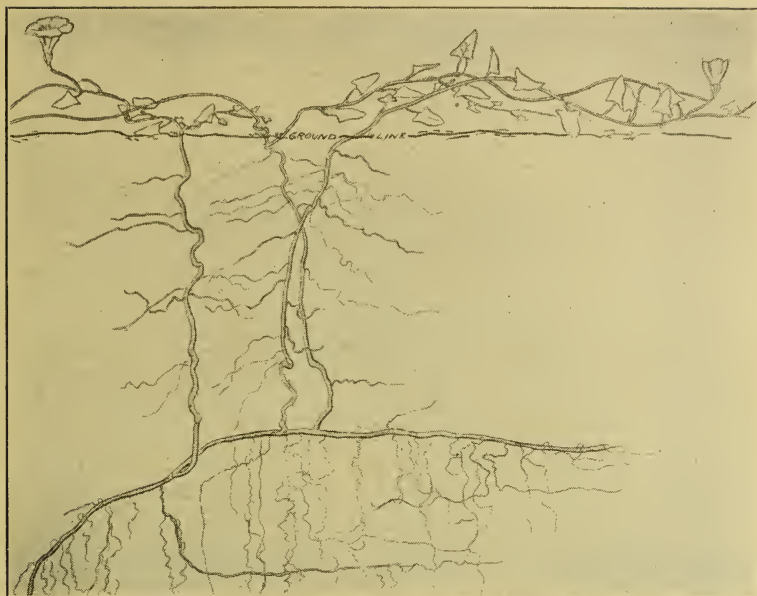


FIG. 139. Diagram showing manner of growth of field bindweed, from deeply-growing, horizontal propagating roots.

samples of the principal agricultural seeds within the past two years:

- | | |
|------------------------------|--------------------------|
| 1. Barley (Wild), 2 species. | 14. Pepper Grass. |
| 2. Barnyard grass. | 15. Plantain, 2 species. |
| 3. Buffalo Bur | 16. Ragweed. |
| 4. Catch-fly. | 17. Rush Grass. |
| 5. Chickweed. | 18. Sage. |
| 6. Cinquefoil. | 19. Sedge. |
| 7. Dandelion. | 20. Shepherd's Purse. |
| 8. Dog Fennel. | 21. Speedwell. |
| 9. Eragrostis. | 22. Spike Rush. |
| 10. Ground Cherry. | 23. Sunflower. |
| 11. Mexican Tea. | 24. Witch Grass. |
| 12. Mustard (Hare's Ear). | 25. Yarrow. |
| 13. Panicum (Spreading). | |

In the first list, which comprises most of the noxious weeds, the perennials will be discussed first.

BINDWEED (*Convolvulus arvensis* L.).

The weeds known by the name of Bindweed (Fig. 138), in this state, are three in number—the field bindweed, the hairy bindweed and the hedge bindweed. Of these, the first comes from Europe, while the second and third are native. The bindweeds all belong to the genus *Convolvulus* of the morning

glory family—the *Convolvulaceæ*. There are altogether 175 species of *Convolvulus*, of which thirty occur in the United States and three in Kansas. The worst of these, and by all odds the worst of all the weeds in this state, is the field bindweed (*Convolvulus arvensis* L.). It has arrow or spear-shaped leaves, borne on climbing stems that may in some cases grow



FIG. 140. Buckhorn; seeds $\times 4$.

as high as six feet, but ordinarily from six inches to a foot and a half in height. The flower stalks bear from one to four white or pinkish flowers resembling small morning glories. Its seeds are black, somewhat like those of the morning glory, but rounder and less pointed. The weed propagates not only by the seed, but by means of running roots. Its root system is very extensive and deep, in some cases penetrating to a depth of ten feet. By means of the propagating roots (Fig. 139), which grow out horizontally in every direction, the weed spreads very rapidly from season to season. The only final means of eradication is the application of salt, to the amount of about five tons per acre.

This treatment will render the land useless for a time, but it is effective. Pigs feed voraciously upon this weed, and in one instance that came under the writer's observation, an acre of the weed was practically eradicated by twenty-five hogs. The hairy bindweed closely resembles the field bindweed, but has hairy instead of smooth leaves, while the hedge bindweed is much larger, and propagates under ground by rootstocks or underground stems, instead of by roots.

BUCKHORN (*Plantago lanceolata* L.).

Buckhorn, Rib-grass, or English plantain (*Plantago lanceolata* L.) is a common weed (Fig. 140), in tame grass meadows especially. It belongs to the well-known plantain family (*Plantaginaceæ*). There are over 200 species of plantains, of which some forty-two occur in the United states. The plant is a perennial, growing from a short crown, which bears numer-



FIG. 141. Canada thistle; seeds $\times 4$.

ous long, narrow, hairy leaves, with plainly marked ribs. An upright spike bears the numerous flowers and seeds. The latter are brown in color, rounded on the back and hollowed out on the face somewhat like a canoe. The weed increases also by the multiplication of the crown, thereby forming a large clump of plants in a single spot.

CANADA THISTLE (*Carduus arvensis* (L.) Robs.).

This weed is one of the worst to eradicate. It belongs to the composite family of plants (the *Compositæ*), which includes also golden rods and asters. There are about 250 species of

thistles, of which 52 are found in the United States. The Canada thistle (Fig. 141) is a plant growing from one to three



FIG. 142. Wild carrot; seeds $\times 4$.

feet tall, with large, deeply divided, and very prickly, spiny leaves. The flowers are borne in small, clustered, purplish heads, which later enclose numerous seeds. This plant also propagates by running stems or root-stocks underground. As in the case of the bindweed, the salt method of eradication can be used. Fortunately the Canada thistle is not abundant in Kansas, but where found it should be scrupulously cut and burned to prevent seed formation. Another method of eradication which has been effective in Illinois is here given. Millet is sown to the amount of one bushel per acre and is plowed under in September; or seeded to rye, which is plowed under about the middle of May. By June 15 the ground is plowed, and in not more than a month it is seeded to millet again, which is cut for hay in the fall. The Canada thistle can be distinguished from the other thistles found in our territory by examining the roots.

If slender, horizontal, underground propagating root-stalks are found, the plant is the Canada thistle. All others have tap-roots.

CHICORY (*Cichorium intybus* L.).

Chicory is a tall, stiff, branching, blue-flowered perennial with a deep tap-root. It belongs to the chicory family (*Cichoriaceæ*), which contains about 1,400 species. Chicory belongs to the genus *Cichorium*, of which there are eight species native to the Old World. It is frequently a troublesome weed in al-

alfalfa fields, and is only to be eradicated by digging out the individual plants and cutting the tops to prevent the spreading of the weed.

DODDER (*Cuscuta arvensis* Beyrich., field dodder), (*Cuscuta epithymum* Murr., clover dodder).

The plants known as dodder (Fig. 144) constitute a family called the dodder or cuscuta family (*Cuscutaceæ*), comprising 100 species, 27 occurring within the United States. In Kansas two species are of some economic importance. Field dodder, or small-seeded dodder (*Cuscuta arvensis*), attacks alfalfa, and its seeds are sometimes found in alfalfa seed. Clover dodder (*Cuscuta epithymum*) grows on the stems of Red clover and other plants. The two species can be distinguished in the field by the color of the stems, alfalfa dodder having pale yellow stems, and clover dodder red stems. Alfalfa or field dodder is a native wild plant found on herbs and shrubs of various kinds, thence escaping to alfalfa fields, while clover dodder, a plant introduced from Europe, infests clover and other plants.

Dodder is a very peculiar plant, differing from most other flowering plants in being parasitic. It is a leafless vine, which, after starting from the seed, dies, unless the stem finds a suitable plant to entwine, and to penetrate with its suckers for food. By absorbing the juices from the "host plants," as they are called, it frequently does much damage. Dodder vines may form large masses, overlying considerable clumps of alfalfa and clover, killing out their tops. The dodder plants are easily exterminated by mowing before they flower. If cut when in blossom they should be burned to ensure the destruction of any seeds that have been formed.



FIG. 143. Head of cheat; seeds $\times 4$.



FIG. 144. Clover and alfalfa dodder. Seeds of field dodder below; alfalfa dodder above; seeds $\times 4$.

JOHNSON GRASS (*Sorghum halepense* L. Pers.).

There are thirteen species in the genus *Sorghum*, widely distributed in warm, temperate and tropical regions. One of these, *Sorghum vulgare*, is represented by some 1,500 varieties, including cane, kafir, milo, and feterita. Johnson Grass (Fig. 145), which is most closely related to these common sorghums, is often regarded as a possible wild species, from the like of which the cultivated sorghums may have arisen. The plant grows from two to five feet tall, according to soil and climatic conditions, and bears open heads very similar to those of Su-

dan grass. In fact, the whole plant more nearly resembles Sudan Grass than it does any other plant. But its stems are harder and more slender, and it lives over from year to year, by means of thick, white, jointed underground rootstocks (Fig. 146), which, when cut in pieces by farming operations, produce a new plant from every joint. Johnson grass can be eradicated by keeping the plants closely mowed during the season, which prevents them from sending down the rootstocks as deep as usual. By mowing closely a second season the root system is kept close enough to the surface to permit of plowing it out. Hogs on light feed will devour the upturned rootstocks with avidity.

The seed of Johnson grass so closely resembles that of Sudan grass that much Johnson grass has come into the state in recent years in Sudan grass seed, especially from Texas. In bulk, Sudan grass seed is generally yellowish in color, while that of Johnson grass is usually dark red, but it is very difficult, if not absolutely impossible, to distinguish any single seed of Johnson grass from one of Sudan grass. The only recourse is to use due precaution and buy from reputable sources only.

QUACK GRASS (*Agropyron repens* L. Beauv.).

Quack grass (Fig. 147), belongs to the genus *Agropyron*, a group of about 40 species, of which 22 occur in the United States. This plant is a pernicious weed, propagating both by surface and by underground stems. It is seldom found in this state, but when present in any quantity, it should be eradicated by plowing under about seven or eight inches deep while it is



FIG. 145. Johnson grass, showing mass of underground stems or rootstocks. Seeds of Johnson grass at left; Sudan grass at right; seeds $\times 4$.



FIG. 146. Root stock or underground propagating stem of Johnson grass.



FIG. 147. Quack grass showing propagating underground stem, and new plant starting; seeds $\times 4$.

in bloom. The ground is then double-disked lengthwise of the furrows, shallow enough to avoid turning up the sods. Disking is repeated every three or four days for a month, then once a

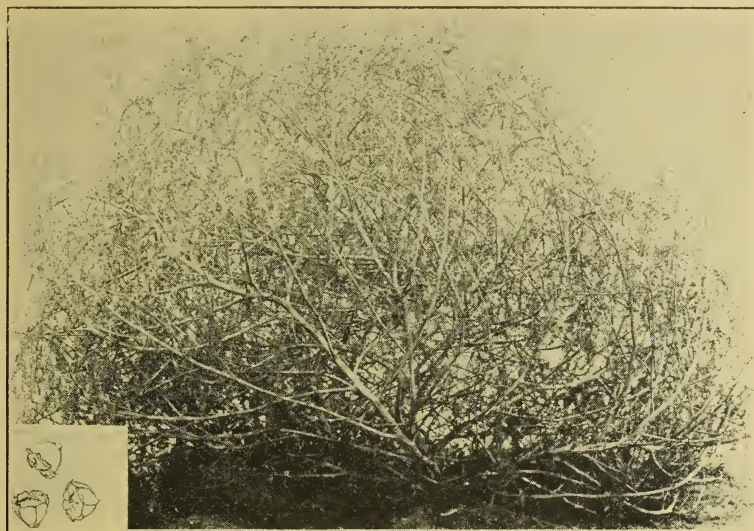


FIG. 148. Russian thistle, or tumble weed; seeds $\times 4$.

week, or often enough to keep down the tops. The next year clean cultivation is maintained, with corn surface-planted. Small tufts of quack grass around posts, etc., should be dug out

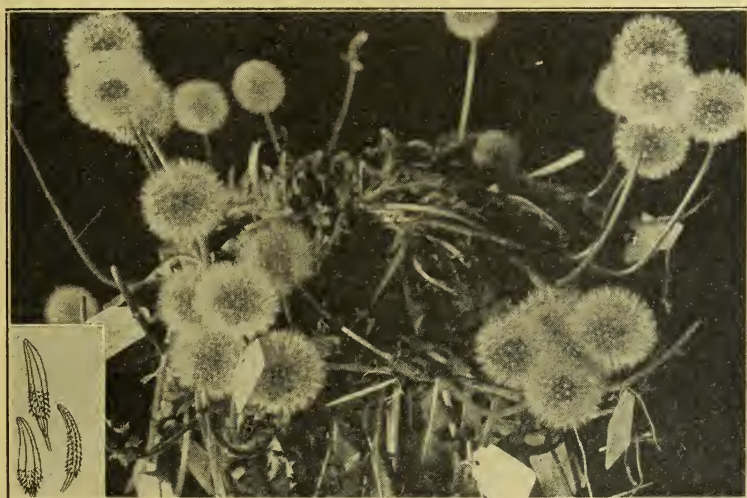


FIG. 149. Dandelion in seed; seeds $\times 4$.



FIG. 150. Pasture or Bull thistle, showing manner of propagating from tubers.

by hand, and small patches covered with tar paper until the grass is dead.

RUSSIAN THISTLE (*Salsola Tragus* L.).

The Russian thistle (Fig. 148), is a well-known annual plant, belonging not to the thistle family, but to the goosefoot family, (*Chenopodiaceæ*). There are about 50 species, of which two

FIG. 151. Witch grass; seeds $\times 4$.

occur in the United States, both having come in from northern Europe or Asia. It is eradicated by clean cultivation, mowing, and burning.

SOW THISTLE (*Sonchus arvensis* L.)

The Sow thistle belongs to the chicory family (*Cichoriaceæ*). The genus *Sonchus* contains about 45 species, of which four occur in the United States. The perennial Sow thistle, although occurring in neighboring states, has not yet been reported here. It is a plant which seeds abundantly, and has deep roots and creeping rootstocks. The annual Sow thistle, *Sonchus asper*, is a common weed in and around cultivated ground, and grass plots. It seeds abundantly, but is easily kept out by mowing before it goes to seed.

DOCK (*Rumex crispus* L.). CURLED DOCK (*Rumex acetosella* L. Sour Dock).

The docks belong to the smartweed family of plants (*Polygonaceæ*). The genus to which they belong includes 130 species, of which 22 occur in the United States. Two species are troublesome weeds in this state. The larger species, Curled



FIG. 152. Crab-grass; seeds $\times 4$.

dock, is a large plant about one and one-half feet high, with large crinkled leaves and stout, heavy roots. It occurs mostly in rather rich soil, and is best eradicated by plowing out the patches, picking out the plants and their roots, and burning them. Small pieces of dock roots will readily sprout and form new plants.

Sour dock is not infrequently encountered in tame grass pas-

tures. It is a low-growing plant about six inches high, which is perennial by means of slender, woody, underground stems by means of which it spreads more rapidly than the larger Curled dock.

The other weeds in the above lists are, with few exceptions, annuals which can be eliminated by clean cultivation. Illustrations of the principal annual weeds and their seeds found most commonly in agricultural seed in this state accompany this article.

CONCLUSIONS.

Attention is directed to the fact that the most noxious weeds in the state are invaders from Europe. While no considerable amount of alfalfa or other seed comes directly into Kansas from Europe, seed is shipped from that continent to the eastern and middle states, and the weeds in it have come west through the continued sale and shipment of seed. This also holds true of the weeds that come in with clover and tame grass seed.

There is a need in this state for some form of seed law that will bring about a general standard of purity for commercial grades of seed, so that trade names or seed labels will indicate something definite as to the quality and purity of seed. It is also desirable that such a seed law require that all seeds sold or offered for sale be so labeled that the buyer may know definitely what he is getting.

To control the most dangerous noxious weeds it might be desirable to make a law which would enable the township officers to enforce eradication if the land owner is unwilling to take steps himself in this direction.

The control of noxious weeds and the securing of pure agricultural seeds are matters of state-wide importance, and both farmers and seedsmen should coöperate steadily towards securing legislation in these two directions.

The care and control of domestic animals, which are intelligent yet submissive to his will, tends to develop the best instincts in man and make him kindly, self-reliant, and trustworthy. The good stockman grows proud of his sleek, well-bred animals, and derives a satisfaction therefrom not measured in money. With pride he may hand down to his sons his reputation as a breeder. He is also able to leave them fertile fields which he has built up rather than robbed, a heritage bequeathed by but few grain farmers.—*Henry and Morrison, in Feeds and Feeding.*

ROUND THE FARM.

POULTRY FEEDING.

By ROSS M. SHERWOOD, specialist in Poultry Husbandry, Kansas State Agricultural College.

THERE are two ways to feed poultry—one is to feed for maximum production, the other is to feed for maximum profits. These two ways may be alike, but such is not always the case. For instance, under certain care a flock may be yielding an annual income of \$3.10 per fowl, with an expense of \$1.60, leaving a profit of \$1.50 per year. The feeder may buy certain feeds at high prices and increase the income to \$3.25, but increase the expense to \$1.80, leaving a profit of only \$1.45. Therefore, a farmer who has grown certain feeds and values them at what they will bring on the market, should not and will not buy other feeds at higher prices unless the returns are enough higher to more than pay for the added cost. On the other hand, the man who buys all his feeds from feed stores may find it profitable to buy some feeds that the farmer would not find it profitable to buy. In figuring rations the feeder should keep these points in mind and feed a ration for greatest profit, whether it gives the highest production or not.

In order to assist in determining the feeds to use, a little study must be made of the food nutrients. Proteins are materials that are found in both vegetable and animal foods. Those found in feeds from animal sources must be fed in order to get best results from vegetable sources. The proteins are very necessary for growth and for egg production, and if the feeds given do not contain enough of them the results will not be satisfactory.

Two other groups are: carbohydrates and fats. These nutrients are very much alike. Fats are much more concentrated than carbohydrates; they contain two and one-fourth times as much energy as do carbohydrates. Carbohydrates in the feed may be changed to fats in the body, or in the product. Neither of these can be changed to protein in the body, or in the product.

Ash or mineral material is another group which is important. Eggs and chickens both contain larger amounts of certain kinds of mineral matter than is found in the grain feeds. Therefore special attention should be given this class of feed, in order to produce more profitable growth and egg production.

The growing chicks require larger amounts of protein and ash to form flesh and bone, also carbohydrates and fats to produce the necessary body heat and energy and to produce some fat.

In order that the chick may make most satisfactory gain it should receive feed containing each of these food nutrients. The table below shows clearly the feeds most useful to do this.

Protein feeds produce flesh.	Ash feeds produce bone.	Carbohydrates and fats produce heat, energy and fat.
Sour skimmilk. Butter milk. Meat scraps. Bran. Shorts.	Ground bone. Bran. Milk.	Cracked corn. Cracked kafir. Cracked wheat. Oats without hulls.

Of the grains given in the table, corn and kafir have the smallest amount of protein and ash, with wheat second, and hulled oats richest in these nutrients. Thus, in chick feeding, if most of the grain feed is cracked corn or kafir, the chicks must be given more feeds rich in protein and ash than if more wheat and hulled oats are given.

Where either corn or kafir and wheat and oats are available the grain rations may be made of equal parts by weight of each. If both corn and kafir are to be fed with wheat and oats it would no doubt be better to make two-thirds of the ration wheat and oats and use corn and kafir for the other one-third. For young chicks, the corn or kafir and wheat should be finely cracked and the oats used should be steel-cut or rolled oats. As the chicks become larger, coarser cracked grain may be used. When they become half-grown, the grain need not be cracked, and heavy oats may be used in place of the steel-cut oats. The proportion then may be corn or kafir two parts, wheat two parts, and oats one part, by weight.

Although bran and shorts are given to the chicks to supply protein and ash, they supply neither sufficient quantities nor all of the kinds of protein necessary. For this reason sour skimmilk or buttermilk or meat scraps should be fed. Of these

the milk is better than the meat scraps. The milk should be kept before the chicks at all times. The dishes should be scalded often to prevent poisonous molds from growing in them. Care should be taken not to spill the milk on the ground, as this often breeds disease. The bran and shorts may be fed with some finely ground corn, in the proportion of two parts bran, one part shorts, and two parts ground corn. If milk is not available, one part of high-grade meat scraps may be added to this mixture. Dry, ground bone may be kept in a hopper, or it may be mixed with the feed above in the proportion of one pound of bone with fifteen pounds of the feed.



FIG. 153. Hens should receive all the feed they can use, and it is best that they be compelled to exercise for it.

A large number of chicks are lost each year because they are fed too much the first week. They should first be fed when thirty-six to forty-eight hours old, with a little grit, also a little hard-boiled egg mixed with rolled oats or bread crumbs, and all the milk they wish to drink. The second day a small quantity of the grain feed recommended above should be given, together with a small amount of the bran mixture. The first week the chicks should be fed often, but only in small quantities. A chick fed often, but only half what it would eat the first week, does much better than a chick which is fed heavily. This is because the digestive organs are not completely developed before the end of the first week.

When the chicks are half-grown and on range, they may be

fed in self-feeders. These should be set some distance from the roosting house, in order to encourage the chicks to exercise. Fig. 154 shows a satisfactory feeder. If set outdoors, wider eaves should be provided, so beating rains will not wash the feed at the bottom of the hopper.

The practice of throwing out too much feed has the result that the chicks soil it and eat filth with it. This causes disease. On the other hand, the feed may sour and mold and injure the chicks still worse. Another thing that should not be overlooked is that filth attracts flies and that flies often carry tapeworms. These tapeworms spend part of their lives in the flies and the other part in the chicks. If the chicks eat flies containing these tapeworms they will be infected by them. In the case of tapeworms the loss may not come for several weeks, as it takes that time for the worms to develop.

Feeding hens for winter eggs is not very different from feeding chicks. The feeds that were used by the chicks to produce flesh will be used by them as hens to produce the whites of the eggs and part of the yolks. The feeds used to furnish the chicks with heat and energy and to produce fat will be used by them to furnish heat and energy and to produce part of the yolk of the egg. Ash feeds will be used to produce the shell of the eggs.

Feeds for egg production may, for convenience, be classed as grain and mash feeds. About one-third of the grain is fed in the morning in a deep litter of straw or other similar material. This makes it necessary for the fowls to secure exercise in order to get the feed. The remainder of the grain feed, preferably that with larger-sized particles, such as corn, may be fed at night. When corn, wheat, barley, and heavy oats are available, the rate of one-half corn and the other half barley or wheat and heavy oats, by weight, is recommended. Milo, kafir and feterita are quite similar to corn, and may be used as substitutes.

The mash feeds are kept before the fowls at all times. A satisfactory mash ration may be made of equal parts of bran and shorts; with one percent of salt; and 20 percent of meat scraps, or 15 percent of high-grade meat meal or tankage. If the chickens have all the sour skim milk or buttermilk they can drink, it is not necessary to feed any meat scraps.

Alfalfa leaves should be given the fowls whenever they are available. They furnish certain food materials that are not found in the grain or meat feeds. Sprouted oats and roots furnish succulence, but do not furnish the special food material given by alfalfa leaves. A small amount of oilmeal may be given only the fowls that are growing feathers. It contains a certain chemical not found in the other feeds, excellent for the growth of feathers.

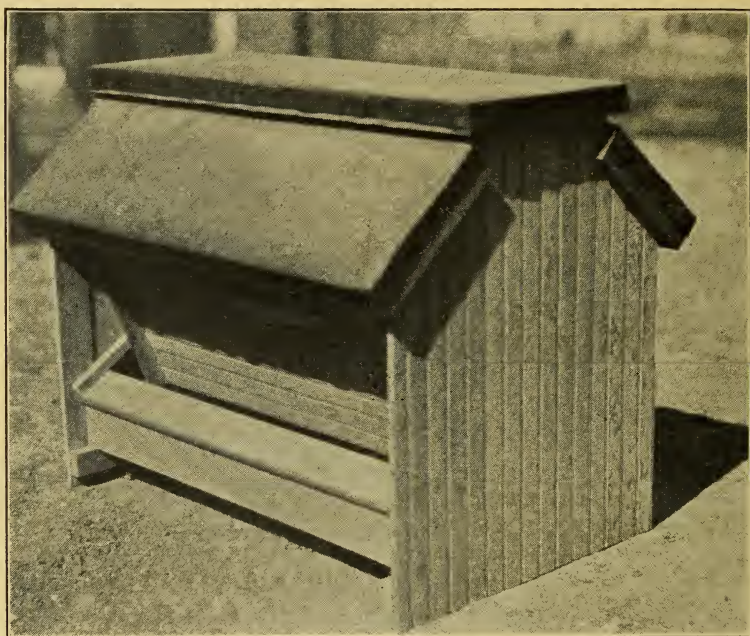


FIG. 154. A self-feeder for poultry.

Oyster shells are necessary for best results. Clam shells, often called poultry shells, are not as satisfactory. The hens do not eat them as readily as they do oyster shells. Water should not be neglected. Eggs are about two-thirds water, and the body of the hen requires still larger quantities. If fresh water is not given abundantly the hens will not lay well.

It does not pay to underfeed hens in winter or in summer. They should get all the feed they can use, and should be compelled to exercise for it.

BEEKEEPING ON THE FARM.

By J. H. MERRILL, state apiarist, Kansas State Agricultural College.

BEEKEEPING may be conducted as a very profitable sideline to any kind of farming, provided that it is given intelligent care. When compared with poultrykeeping as a sideline the odds are in favor of beekeeping. An equal investment in bees will yield more profit, and require less time than will poultry. This does not mean, however, that securing one or two colonies of bees, setting them out in an orchard under an apple tree and forgetting them until fall will yield much



FIG. 155. Honey houses and part of the Kansas State Agricultural College apiary.

honey. In order to get a surplus crop of honey it will be necessary to manipulate the bees in the right way, and at the right time. However, the presence of bee diseases, which are widely spread over the state, is largely doing away with the small, careless beekeeper, and putting beekeeping into the hands of specialists.

At first glance it might seem that if so much technical knowledge is required it is hardly worth while for the general farmer to attempt to do anything with bees. Yet there is no investment of labor and capital that will pay as high a return on the farm as beekeeping. If it is so remunerative, then it is worthy of receiving the proper amount of care. Roughly

speaking, a good colony of Italian bees in a ten-frame hive may be purchased for from eight to ten dollars. In a very ordinary year this colony of bees should produce seventy-five pounds of honey, which, if sold, will more than repay the cost of the original investment. Colonies have been known to far exceed this yield, but it has been under good conditions, and where the bees were given the best of care.

If beekeeping is to be carried on as a side-line to make a little money to be added to the cream and egg fund, and also to provide a very pleasant article of food, it will be best to make a proper start. By this is meant the purchase of a colony or more of bees, in modern hives having movable frames. When the bees are purchased some good textbook on the subject of beekeeping should also be secured and read. The time spent in reading will be pleasantly spent, as the subject is a fascinating one, and the information gained will be invaluable. In addition to reading the textbook, a person should subscribe to one or two of the leading bee journals, because live subjects are constantly discussed in these periodicals, and up-to-the-minute knowledge is gained from them.

The best time of the year to make your start in bees is in the spring, because wintering bees is one of the most difficult problems with which the beekeeper has to contend, and if you buy a colony of bees in the spring you will escape this difficulty. For some it is advisable to buy bees in box hives and transfer them later to modern hives, but for the man with very little knowledge of beekeeping, and who is going to take up beekeeping only as a side-line, it will be more advisable for him to purchase a colony in a modern hive to start with. Early in the spring he should make an examination of his colonies to see if the bees have plenty of food stores to carry them through until the honey flow begins. Select a good, warm day, when the bees are flying out, and armed with a smoker and protected by a bee veil and gloves, open the hive and remove some of the frames to ascertain whether or not the bees have enough honey. If they do not seem to have enough, then they should be fed a syrup made of sugar and water, directions for which will be found in the textbook. If they have plenty of stores they need not be bothered again for some little time.

The next question which will give concern is controlling swarms. Swarming is a nuisance, especially when beekeeping

is carried on as a side-line. It will call a man in from the field when he is busy at something else, or, if he does not come, he may lose the swarm, and so cut down the honey yield. In the textbook the subject of swarm control will be fully discussed, and several methods will be suggested for increasing the colonies by artificial swarming. But it very frequently happens that the side-line beekeeper does not care to increase his colonies, and would like some method that would not call for increase.

The best way to avoid this difficulty is to secure a hive which will give plenty of room for the queen to raise brood. An eight-frame hive is too small, and a ten-frame hive is also too small for a vigorous queen. If the ten-frame hive is used, the difficulty may be avoided by removing the old hive from the stand and putting another hive body, filled with drawn comb or foundation, in its place. Remove one of the frames from the new hive, then examine the frames of the old hive body until the one is found that has the queen on it. This frame with the queen should now be placed in the new hive body, and the queen excluder set on top of that. Then the old hive body should be placed upon this queen excluder. The queen is now confined to the lower hive body, in which there will be one frame; that is, the frame upon which she was introduced, and nine empty frames, so that she has ample opportunity to deposit eggs. The young bees in the hive body over the queen excluder will all hatch out within twenty-one days, and the bees will then store honey in these cells. If the hive becomes overcrowded at any time during the season, the above operation may be repeated.

A still better way is to use a larger hive body than a ten-frame Langstroth, such as the Jumbo or Dadant. Either of these last two named hives are large enough to take care of all the brood that may be raised from a vigorous queen. The bees having plenty of room, will have less desire to swarm. Neither of these methods can be adapted to comb-honey production. In fact, comb honey production will not be discussed in this article, as it requires too much technical detail, and takes more time than a side-line beekeeper would care to give it.

In the summer, if the bees fill a hive body, or a super, full of honey, it may be removed and another put in its place, or,

better still, another should be put on and allowed to remain, as the honey improves when it is ripened in the hive. The best way to get this honey out of the frames is to purchase a small extractor. The expense of this extractor will seem large, but when you consider that the honey can be removed from the frames and placed in pails or jars and kept indefinitely, and without injury to the combs, it will be seen to be a very good investment.

As the strength of the colony depends upon the vigor of the queen, a new queen should be introduced every year or two. Probably the best time for introducing this new queen is in

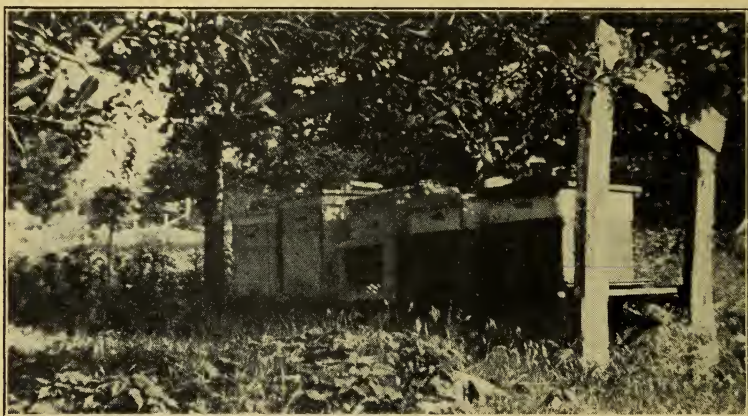


FIG. 156. Bee hives in an orchard cause a better set of fruit.

August, for several reasons, among which are, first, a queen may be purchased cheaper; second, it is a very good time to have her accepted; and, third, a queen introduced early in August will have a large number of young bees in the hive to take advantage of the late fall flow, and to winter over, which is of great value.

After the first frost the bees should be prepared for the winter. The subject of wintering is one which has been given considerable attention, and various theories have been advanced as to the best methods of wintering, but practically all beekeepers are agreed on the following points: The bees should be so placed that their hives are sheltered from the prevailing winds. A broken windbreak forms the best protection that can be given them. A solid windbreak should be avoided at all times. There should be in the hive a large number of young

bees, as they will be able to stand the wear and tear of winter and be in better shape to take up spring duties than will old bees. There should be plenty of stores—thirty to forty pounds of stores should be left in the hive for the bees. If this amount is not already in there, then it should be made up by feeding sugar syrup. Some form of packing protection is also advisable. The hives should be packed beneath and on top, as well as on the sides.

During the winter months, when work is not very pressing on the farm, supplies may be purchased which will be needed



FIG. 157. A bee hive packed for winter.

during the coming season. As most of the supplies used in beekeeping are sold in what is known as the knocked-down form, they will have to be assembled. Some parts will have to be painted, and everything should be prepared in advance, as there is more time to attend to this matter during the winter, and when the supplies are needed it will be too late then to assemble them. Any bee supply house will be pleased to furnish catalogues of their goods upon request. In these catalogues all the different articles used are fully described.

A list is given here of some of the more important textbooks on beekeeping, together with the leading bee journals. There is also a list of "Farmers' Bulletins," prepared by the United States Department of Agriculture, which may be secured free by writing for them.

BOOKS OF INTEREST TO BEEKEEPERS.

These may be obtained from any dealer in beekeeping supplies, from publishers of bee-journals, and from general book dealers.

ABC and XYZ of Bee Culture, A. I. and E. R. Root. Published by the A. I. Root Co., Medina, Ohio.

Beekeeping, E. F. Phillips. Published by the Macmillan Company, New York, N. Y.

Langstroth on the Hive and Honey Bee, revised by C. P. Dadant. Published by Dadant & Sons, Hamilton, Ill.

Productive Beekeeping, F. C. Pellett. Published by J. B. Lippincott Company, Philadelphia, Pa.

First Lessons in Beekeeping, C. P. Dadant. Published by Dadant & Sons, Hamilton, Ill.

BEE-JOURNALS PUBLISHED IN THE UNITED STATES.

The American Bee Journal, Hamilton, Ill.

Gleanings in Bee Culture, Medina, Ohio.

BULLETINS FOR FREE DISTRIBUTION.

(U. S. Department of Agriculture.)

Farmers' Bulletins: 442, Treatment of Bee Diseases.

447, Bees.

503, Comb Honey.

653, Honey and Its Uses in the Home.

695, Outdoor Wintering of Bees.

820, Sweet Clover: Utilization.

961, Transferring Bees to Modern Hives.

975, Control of European Foulbrood.

1012, The Preparation of Bees for Outdoor Wintering.

Also Circular No. 5, "Treatment of Brood Diseases of Bees," may be obtained from the Kansas State Entomological Commission, Topeka, Kansas, or, Dr. J. H. Merrill, State Apiarist, K. S. A. C., Manhattan, Kansas.

INSECTS IN STORED GRAIN.*

By GEORGE A. DEAN, Entomologist, Kansas Experiment Station.

INSECTS injurious to stored grain and grain products, when once started, work so vigorously that the farmer must kill them, dispose of his grain, or allow them seriously to damage it. The infestation insects, if left unchecked, can easily cause a loss equal to from five to fifteen percent of the total value of the grain.

Of the several species of beetles and their larvæ attacking stored grains, not more than five or six are commonly found in the farmers' bins, of which the two species of grain weevils

* Contribution No. 41, from the Entomological Laboratory, Kansas State Agricultural College.

(snout beetles or little "bill-bugs"), the grain molitor the cadelle, and the saw-toothed grain beetle are the most damaging. To these may be added three species of moths, the Angoumois grain moth, which is the most serious attacking corn, and the two meal moths, which are the serious ones in meal, bran, or any other ground grain products. All of these species are of small size, none of the beetles exceeding five-eighths of an inch in length, and most of them being less than one-fourth



FIG. 158. Granary weevil (*Calandra granaria*),
(22 times natural size. (After Girault.)

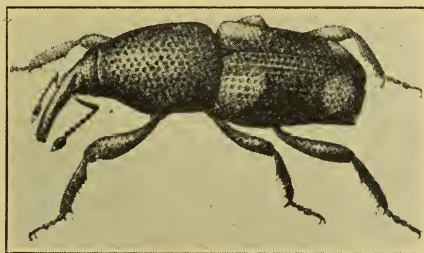


FIG. 159. Rice weevil (*Calandra oryza*),
22 times natural size. (After Girault.)

of an inch long. They are reddish, brown, or black in color. The moths are tiny "millers," and with the exception of the Angoumois grain moth, the work of their larvæ in bins, granaries and mills may be distinguished from that of the beetles by the presence of web or silk in the grain, bran, meal, or flour. Only two of these insects are true weevils, although the farmer and the miller usually apply the term "weevil" to most of them.

Measures to be employed in the control of this class of insects are both insecticidal and preventive.

Fortunately, it matters little what species may be causing the trouble, for all succumb to the same treatment. The simplest, most effective, and least expensive remedy for all insects



FIG. 160. Wheat infested with rice weevil, three times natural size. (After Dean.)

infesting the farmers' grain and grain products stored in tight bins is careful fumigation with carbon bisulphide.

While carbon bisulphide fumigation is effective and is strongly recommended for all insect infestations in the farmers' bins, it is not an effective fumigation in flour mills, and since there is such an element of danger from fire in its use in these mills and in large grain elevators, it is not recommended for this purpose. It is prohibited by mill and grain-elevator insurance companies, and the use of it voids the policies.

The amount of Carbon Bisulphide to be Used. The amount of liquid to be used depends on the temperature, on the size and shape of the building, on its tightness, and on the nature of the attack. Since temperature is a very important factor in the success of fumigation, it should always be given careful consideration. Our fumigation experiments, conducted in practically an air-tight chamber with the larvæ, the pupæ, and the adults of the confused flour beetle (*Tribolium confusum*) and the adults of the rice weevil (*Calandra oryzae*), show that while at a temperature of 90° F. one pound of carbon bisulphide is sufficient for every 500 cubic feet of space; at a temperature of

80° F. one pound of the liquid is required for 400 cubic feet of space; and at a temperature of 70° F. one pound of the liquid is required for every 300 cubic feet of space. At a temperature



FIG. 161. The Cadelle (*Tenebroides mauritanicus*): A, adult beetle, three times natural size; B, larvæ; C, appearance of larva in flour, $1\frac{1}{2}$ times natural size. (After Dean.)

below 60° F. the amount of carbon bisulphide required and the results obtained are so unsatisfactory that it is impracticable to attempt fumigation. If the building is reasonably tight and the temperature is above 70° F., five pounds of carbon bisulphide is sufficient for every 1,000 cubic feet of space, or one pound for every 25 bushels of grain. In case the building or bins are not sufficiently tight to allow thorough fumigation, the amount of the liquid should be doubled or even tripled.

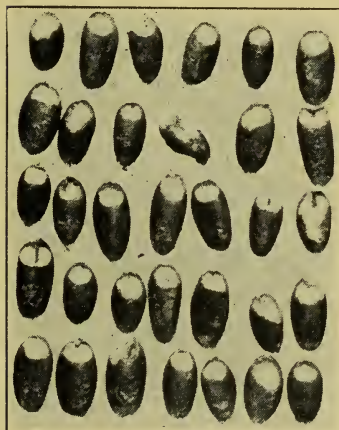


FIG. 162. Kernels of wheat showing the work of the larva and the adult of the cadelle. (After Dean.)

Preparation. The building and bins must be as nearly air-tight as possible, in order that the vapor may remain in all parts of the space in full strength and for the required time. The vapor must enter all cracks and crevices by diffusion. Doors should be wedged tight. If they are

loose, either paper should be pasted over them, or cotton batting should be inserted in the openings with a case knife. A similar treatment should be given all holes and cracks in the wall and floor. The batting should be packed tightly. The

door and one or two windows should be so arranged that they can be opened from the outside when fumigation is completed. Care should be taken to have everything ready and in place, so that after the distribution of the liquid has begun it will be unnecessary to stop to adjust anything. Everything should be done to avoid unnecessary delays and to facilitate the rapid evaporation of the liquid.

Placing the Liquid. Since the vapor is heavier than air and settles to the lower parts, the liquid should be placed in shallow pans at the top of the bins or buildings. It should be well distributed, not more than a pound in a place, and even less than this amount where it is practical to have it distributed in small quantities. If larger amounts are used in one place, it should



FIG. 163. Angoumois grain moth (*Sitotroga cerealella*); A, wings in natural position; B, wings expanded; four times natural size. (After Dean.)

be placed in pans having considerable evaporating surface. In large bins, to hasten and to equalize the operation, it is well to put a quantity of the liquid in the center of the grain by thrusting into it a gas pipe, loosely plugged at one end, down which the carbon bisulphide may be poured, the plug being then loosened with a rod. The plug should be attached to the rod in order that it may be withdrawn. Unless used in excessive quantities the liquid will not injure the edible or germinative qualities of the grains or seeds.

If a building of more than one floor is to be fumigated, the operator should begin on the first floor and work upward, and after placing the liquid in the upper story, leave the building through a window that he can close after him. If it is impossible to get out from the upper story, the carbon bisulphide should first be distributed there, and the operator should work downward as rapidly as possible to avoid the settling vapor.

Length of Exposure. The bins or building should be allowed to fumigate 36 hours. If the grain is not to be used for

germinating purposes, it is well to subject it to the fumigation for 48 hours. The best plan usually is to apply the liquid on a Saturday afternoon and leave the building closed until the following Monday.

Ventilation. Doors and windows should be opened wide and the building or bins aired thoroughly one or two hours before being entered. Slight traces of the odor will linger in corners and other places where the air does not circulate freely, but these will gradually disappear.

Precaution. The vapor of this liquid is highly inflammable and explosive. No fire or light of any sort should be allowed about the building while the fumigation is in progress. The application should always be made in daylight, for artificial light of any kind is dangerous. Electric lights must not be used, since when turning them on or off there is always danger of producing a spark. It is not safe to have heat of any kind in the building while the fumigation is in progress.

In order that infestation in the stack may be avoided, the grain should be threshed as soon after harvesting as practicable. The writer has found on several occasions that where the grain was left in the stack until early fall it was seriously infested with the Angoumois grain moth

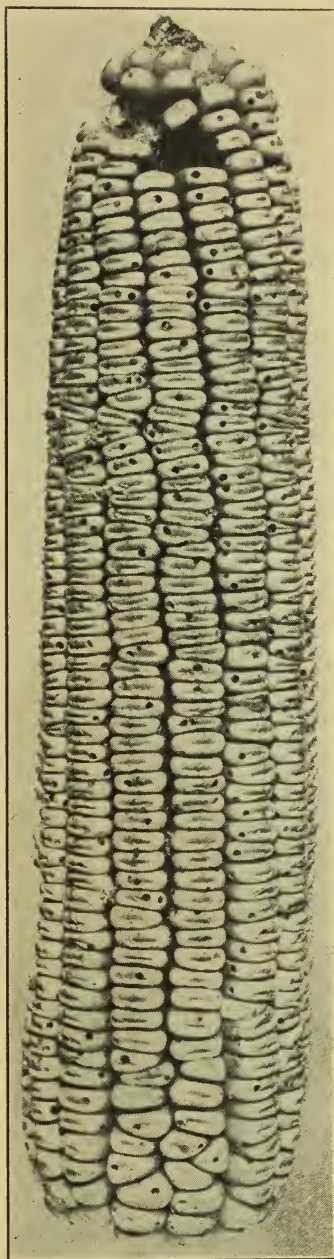


FIG. 164. Ear of corn showing the work of the Angoumois grain moth, reduced one-fourth. (After Dean.)

and the grain weevil. Fresh grain should not be exposed to attack by storage in bins or granaries containing infested grain. Before storing, the old grain should be removed and the floors, walls, and ceilings of the bins thoroughly cleaned.

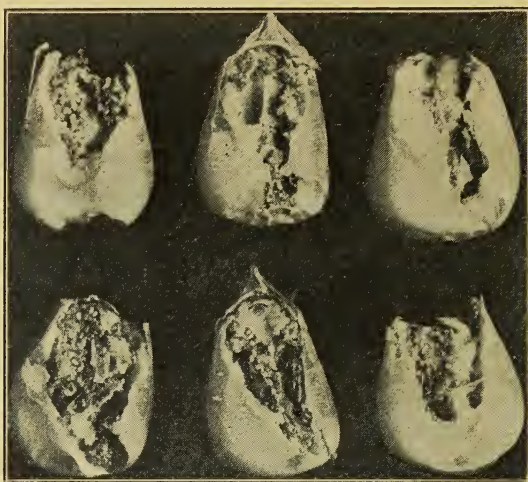


FIG. 165. Kernels of corn showing the work of the larva of the Angoumois grain moth, $1\frac{1}{2}$ times natural size. (After Dean.)

If the granary has been badly infested, it should be fumigated before the new grain is stored. Since cleanliness is very important in the prevention of injury by these insects, all dust, dirt,

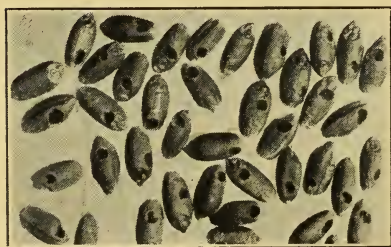


FIG. 166. Kernels of wheat showing the work of the Angoumois grain moth. (After Dean.)

rubbish, refuse grain, flour, and meal, which serve only as breeding places, should be removed. If the grain is infested by the grain or meal moth, frequent agitation or handling of the grain will destroy many of them, because they are unable to free themselves from a mass of it, and perish in the attempt. A lib-

eral use of air-slaked lime is recommended for dusting in corners and along the edges of bins. This lime should be dusted in the bins as soon as they are empty, but removed before storing the grain. Granaries, as far as possible, should be

constructed so as to be easily kept clean, and in such a manner as not to allow materials to collect and afford lurking places for insects. Granaries should also be constructed so as to avoid dampness. This dampness induces a condition in the grain termed "heating," and thus favors a rapid increase in insect life. It is also a fact that when insects are abundant in grain they cause, in some unexplained manner, a rise in temperature. If corn is showing infestation in the open crib, it should be shelled at once, and, after it is stored in tight bins or in the granary, should be fumigated with carbon bisulphide.

GOOD BIRDS AND BAD BIRDS.

By W. L. McATEE, Biological Survey, U. S. Department of Agriculture,
in *Woman's World*.

BIRDS are protected primarily because they are loved, but, in response to the demands of this utilitarian age, it has come to pass that the structure of bird protection rests upon a broad foundation of exact knowledge of the food, habits, and

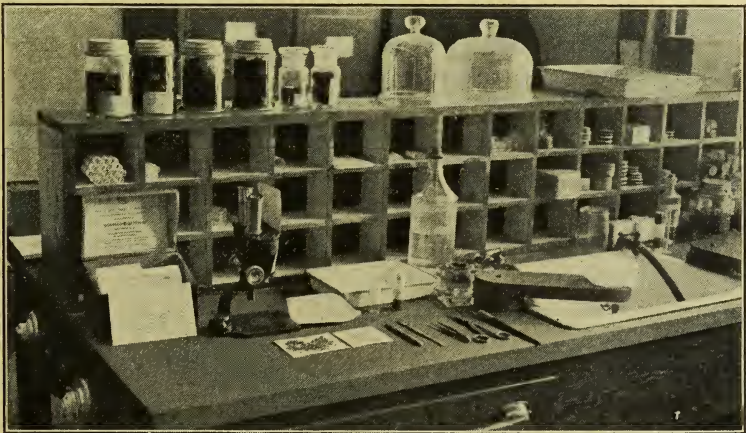


FIG. 167. Outfit for analyzing the food of birds.

other economic relations of birds. In other words, a scientific study has been made of those features of bird life which control our decision as to what are good, and what are bad birds. By far the greatest part of this study has been carried on in the Bureau of Biological Survey, U. S. Department of Agriculture. This bureau has issued more than 160 publications deal-

ing with the value of birds, many of which are still available for distribution to the public.

The methods by which the work is accomplished are interesting. In the first place it must be understood that in general the only way in which we may accurately learn the details of birds' feeding habits is by the examination of stomach contents. Outdoor observations as to what birds seem to be eating are notoriously faulty. It is a common experience to receive for examination a bird's stomach labeled thus: "this bird was pulling corn," or "this bird was stealing cherries," and the like, and to find upon opening the stomach not a trace of the product

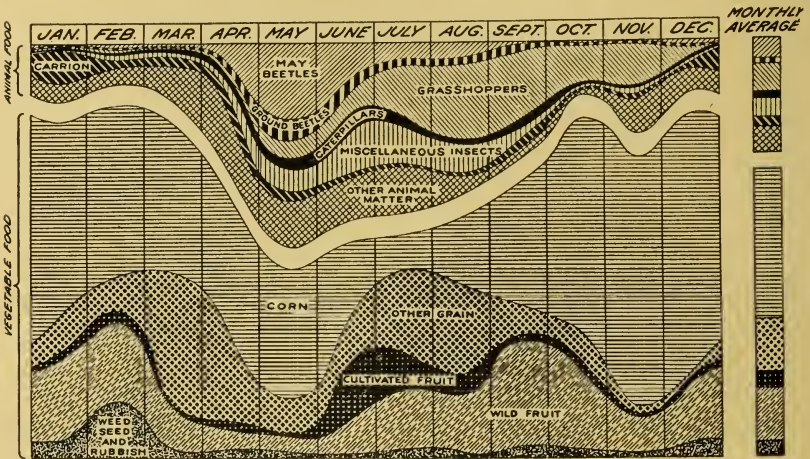


FIG. 168. Graphic representation of the food of a bird.
Principal food items of the crow.

mentioned. The stomachs examined by the Biological Survey are obtained chiefly from persons who are collecting the birds for some other scientific purpose. They come in small numbers from many localities at all times of the year, and in the long run give us just the material we need for a thorough study of the food of a species; that is, representing all sections of the country and all months in the year. Occasionally when some great pest, as the cotton-boll weevil, or alfalfa weevil, is ravaging some part of the United States, the Survey sends collectors to the spot to get material which will prove the relations of birds to the insect. In this way it was learned that at least sixty-six species of birds do something toward keeping the annual damage of \$25,000,000 by the cotton-boll weevil from going still higher.

The examination of stomach contents is made with the aid of microscopes, and the ground-up insects, seeds, etc., are identified as fully as possible. Sometimes the tiniest fragments suffice for specific identification and the achievements in this line seem miraculous to the uninitiated. Birds are general collectors; almost anything they can swallow seems acceptable.

For instance, a hawk's stomach may hold at one time the remains of one or more of each of the following items: mouse, bird, snake, frog, grasshopper, earthworm, and snail—repre-

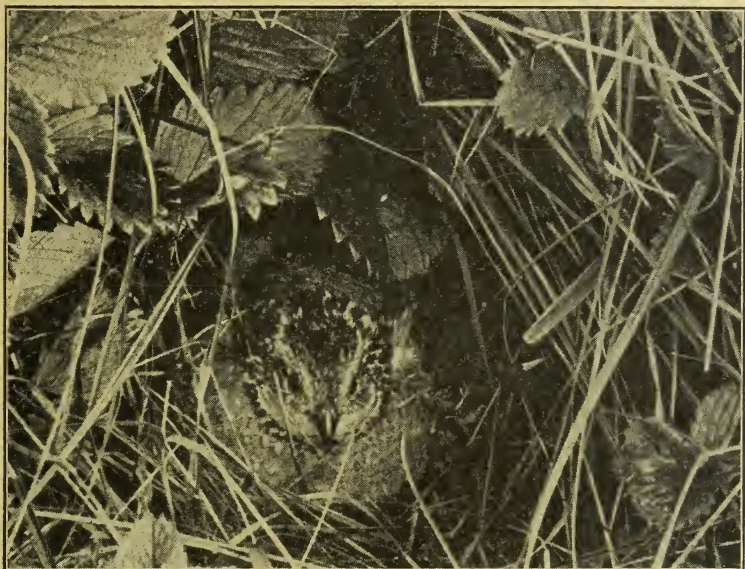


FIG. 169. Bob White; an example of the somewhat useful land game birds.

sentatives of the seven primary animal groups, mammalia, aves, reptilia, batrachia, arthropoda, vermes, and mollusca. A pintail duck's gizzard and gullet was found to contain fourteen kinds of insects, crustacea, and molluscs, leaves, and stems of five different kinds of aquatic plants, besides seeds and tubers of nineteen kinds.

We must have an abundance of exact information about the food of each bird to determine whether it is good or bad. Does it feed too much on grain, on cultivated fruits or garden products? Is it too fond of poultry or useful wild birds? Is it a nuisance in any way? We must know on the other hand how many and what kind of insects it takes, are they useful or in-

jurious, as the honey bee or the boll weevil? Does it help us battle against other pests, as mice, rats, gophers, ground squirrels, crayfish, or slugs? In fact, the relations of the bird to all

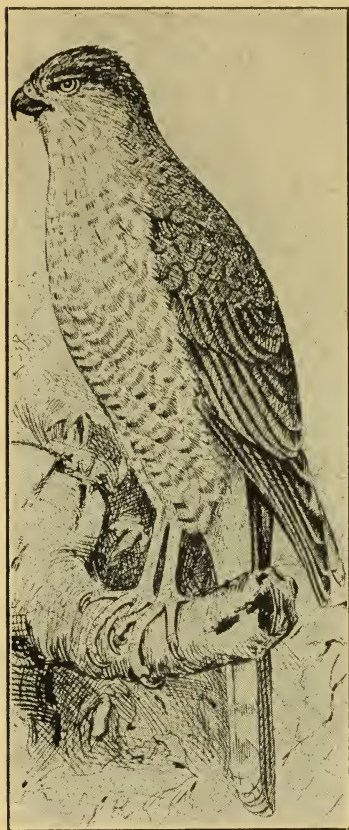


FIG. 170. A bad bird; the chicken Hawk, or Cooper's hawk.

of its surroundings at all times must be taken into consideration when we are deciding whether to call it good or bad. It relieves the situation somewhat to think of birds, not in two categories, good and bad, but in three, defined as follows: (1) Those chiefly beneficial, (2) those in which good and bad qualities about balance each other, and (3) those which are chiefly injurious.

The latter, being comparatively few in number, form a group of easily remembered characteristics. To it belong the fiercest hawks, as the gyrfalcons and duck hawk and those belonging to the swift, intrepid and savage group often known as blue darters. These latter are the sharp-shinned hawk, Cooper's hawk, and goshawk. The goshawk in some regions is known as "partridge hawk" from its fondness for ruffed grouse. Cooper's hawk is preëminently the "chicken hawk" of the United

States and its bad deeds are chiefly responsible for the unsavory reputation of the hawk tribe as a whole.

It should be remembered, however, that there are thirty-three species of hawks in North America and only six of them are classed as chiefly injurious. In any locality in the eastern United States, for instance, there may be ten or twelve of the good or very good hawks to three or four of the bad ones. It is evident, therefore, that the indiscriminate shooting of hawks so frequently indulged in cannot but result in harm. The blue

darters may be recognized by their rapid, direct flight. Their habit is to skim over the surface of the ground or shrubbery and swoop upon their prey when sighted. Many other hawks soar about in circles, or hover in the air when looking for prey. These slower and more conspicuous hawks belong to the beneficial groups, but the ease with which they are seen and approached brings about the death of many of them, while the elusive blue darters come off scot-free.

Another group of birds belonging to the chiefly injurious class is the sapsuckers. These woodpeckers, of which three species inhabit the United States, only one occurring east of the Rockies, two in the Rocky Mountain region itself, and all three on the Pacific Coast, get a large part of their subsistence from the inner bark, cambium, and sap of trees. The regularly arranged rows of punctures they make on the limbs and trunks of trees are familiar to everyone. The birds are known to kill apple, peach, and other fruit trees, birches, mountain ash and other ornamentals, and pines, poplars and hickories in forests.

A total of 275 kinds of trees, shrubs, and vines are now known to be attacked by sapsuckers in the United States. Of this number sixty-three are often seriously damaged, and thirty-two of them are sometimes killed.

Even greater damage results in timber trees that are not killed by the bird's work. The holes allow water, bacteria and fungi to enter the wood; this results in more or less rotting and staining, these effects being especially severe in hickory, and the cause, in some localities, of 10 percent of the trees being rejected by buyers. Great damage is done to oaks, also, especially white oak, which is prized for furniture, veneering, and ornamental finish. Other valuable woods blemished are walnut, cherry, mahogany, maple, and yellow poplar. The writer has examined wood of 174 species of trees which contained defects

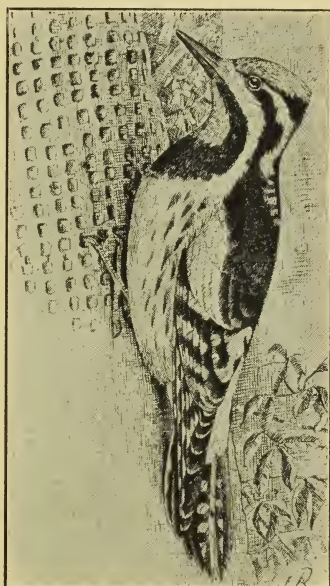


FIG. 171. An injurious bird.
The yellow-bellied sapsucker.

due to sapsucker work. In ninety of these they are sometimes so serious as to spoil the appearance or workability of the wood; and in twenty-two species they may render the wood useless except for coarse construction or fuel. A conservative estimate of the annual damage to timber in the United States is \$1,250,000. The sapsuckers may be poisoned by putting powdered strychnine in the fresh holes or by smearing a mixture of

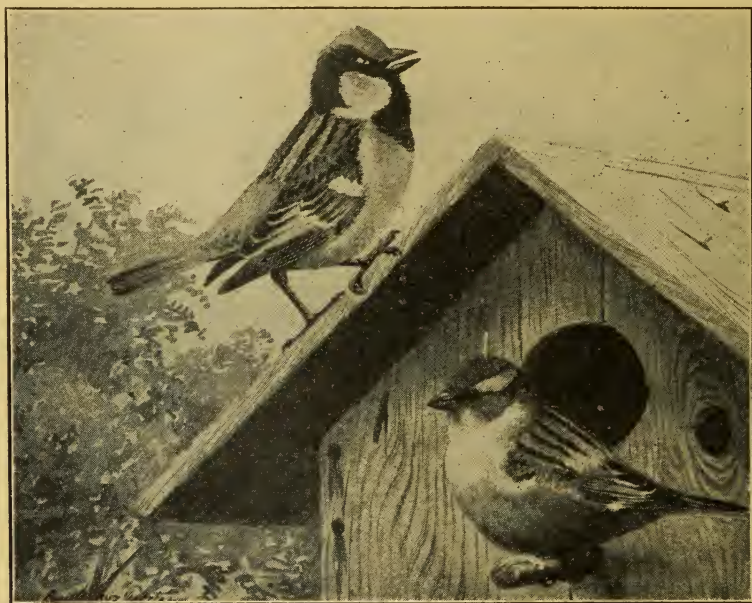


FIG. 172. The English sparrow is usually condemned, but it is not without good points.

honey or other thick syrup and strychnine about the tree just above fresh rows of punctures.

The English sparrow is usually classed with the chiefly injurious birds, but it must be borne in mind that this is done mainly because the bird is a nuisance with its noise, dirt, and rubbish, and not because it has (generally speaking) particularly injurious food habits. Recently a complaint was received that English sparrows were picking open all the pears in an orchard to get the seeds. A later letter withdrew the accusation, saying that further observation showed squirrels to be the culprits. The moral of this is "give a dog a bad name" and you will hear no more good of him.

In the writer's mind there is considerable doubt as to the propriety of classing the English sparrow with the chiefly injurious birds. Rather, in his opinion, should it be placed in the group now to be discussed; birds in which good and bad qualities about balance each other. To this class belong certain species which, although beneficial in some respects, are likely at any time or place to attack crops or other property of man to such an extent that it is not wise to give them general protection. Such birds are the golden eagle, bald eagle, pigeon hawk, prairie falcon, great horned owl, magpies, jays, crows, ravens, housefinch, and robin. As a rule these are wary and shrewd birds which often are protected by their fecundity. The degree of protection they are to receive should be considered a local problem, for as noted above they may be very injurious in one area and not in another.

To the class of half-and-half, injurious and beneficial birds, belongs another group of species whose most important trait, economically considered, is that of gathering in flocks after the breeding season. When scattered over a vast area during the nesting period most of them are beneficial, perhaps even highly so, but when they band together in the fall they are prone to feed upon corn, rice, and other grain crops, sometimes becoming a veritable calamity. Such birds are the bobolink, the red-winged, bicolored, tricolored, rusty, Brewer's crow, and the boat-tailed blackbirds. The imported starling is closely related to these birds and where abundant has similar habits. However, it is not so fond of grain as its American counterparts.

The cowbirds flock with their cousins, the blackbirds, and although less numerous and hence less destructive to grain, make a black mark for themselves by parasitic habits. They lay their eggs in the nests of other birds and the young when hatched shoulder the other nestlings out of their rightful home. Each young cowbird is thus responsible for the death of three or four other birds at least as good, if not better than itself.



FIG. 173. The crow; one of the birds that does about as much harm as good.

The crow, English sparrow, and the cedarbird, resemble this group economically in one respect, namely, that most of the damage to crops is done by flocks.

The bobolink and blackbirds are considered game, and hunted during a specified open season in various localities from New Jersey south. In the writer's opinion this is the ideal remedy; something should be done to keep down the number of these birds, and aggressive action is easiest and most effective where the birds occur in flocks. All of the migratory species of the group of half-bad and half-good birds should be kept down to

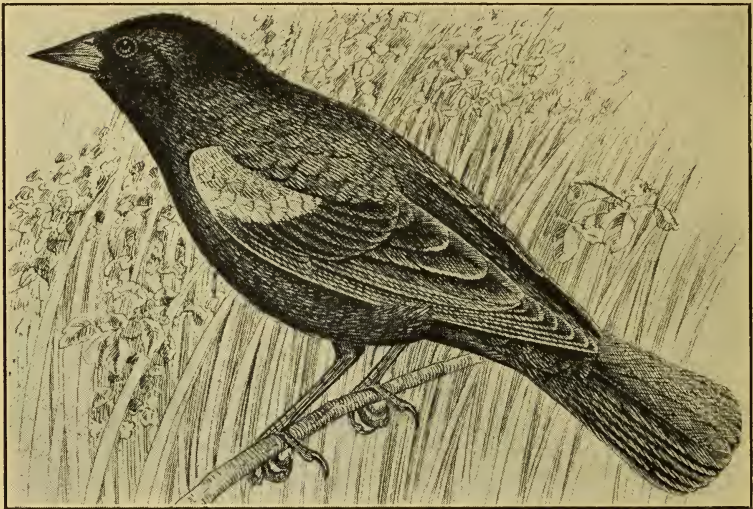


FIG. 174. A flocking bird, usually too numerous. The red-winged black bird.

reasonable numbers in the same way. As a result of much longer experience with harmful birds, European countries have established open season for species like skylarks and starlings. Although large numbers of the birds are netted or shot, they fully hold their own.

The resident species, or those that live in the same region all the year, should receive protection only during the time that they are beneficial. The law should permit destruction of these species when caught red-handed; that is, during the whole period when actual damage is being done.

Much space has been given to the discussion of bad birds and birds of evenly mixed good and evil tendencies, but it must not be forgotten that the numbers of these birds (about fifty

species in all) compared to the whole, is small. They have been specifically named, and their habits described, only because it is very desirable that they should not be confused with the chiefly beneficial species, to the detriment of the latter.

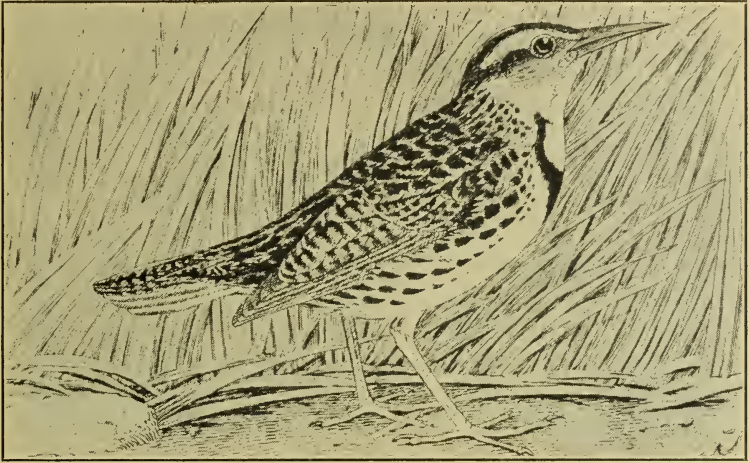


FIG. 175. The Meadow Lark is a chiefly useful bird.

The birds known to be chiefly beneficial include the Franklin's gull, the black tern, the shorebirds, or sandpipers, snipe and plovers (about sixty species in all), most of the grouse and

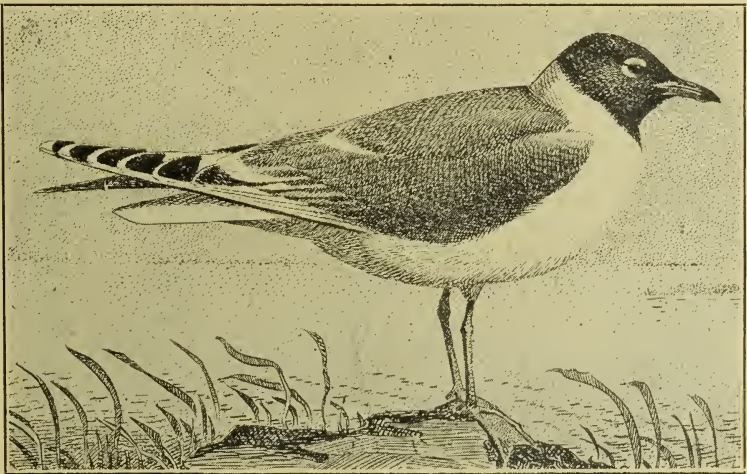


FIG. 176. Franklin's gull is a beneficial bird.

quail (about fifteen species), the cuckoos (4), woodpeckers (19) (except sapsuckers), whip-poor-wills (3), nighthawks (2), swifts (4), hummingbirds (18), flycatchers (31), horned larks, meadowlarks (2), orioles (6), finches, native sparrows and grosbeaks (about 90 species in all), tanagers (4), swallows (10), shrikes (2), vireos (10), warblers (50), thrashers and wrens (20), creepers, nuthatches (3), titmice and chickadees (10), bush-tits (4), wren-tits, kinglets (2), gnatchatchers (3), thrushes (6), and bluebirds (3). This list totals about 416

species and includes only those birds which we have studied sufficiently to be fairly sure of their economic status. Besides these, the nine chiefly injurious species and the forty-odd in which good and bad qualities about balance, there are about 338 others found in the United States, whose true economic influence is not at present known. Some of them may fall into the less useful or injurious groups, but it is probable that a large number of them will have a commendable record.

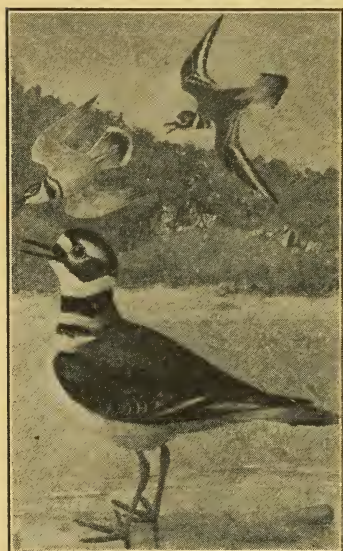


FIG. 177. Beneficial birds—killdeers.

Franklin's gull and the black tern, so far as known, are the most insectivorous birds in their respective families. They frequent the great marshes and lakes of the interior, but they do not hesitate to forage over the neighboring farms, the gull even following the plow. They consume great numbers of insects, especially grasshoppers. Stomachs of Franklin's gulls sometimes yield very large numbers of insects. For instance, one contained seventy entire grasshoppers, jaws of fifty-six more, and remains of three crickets, while another contained eighty-two beetles, eighty-seven bugs, 984 ants, one cricket, one grasshopper, and two spiders, or 1,157 insects in all. Other pests eaten by these birds are white grubs, leaf-beetles, click beetles, weevils, and predaceous water beetles.

It is only recently that the economic value of the shorebirds

has been recognized. These graceful birds, commonly known as sandpipers, snipe, plovers, curlews, etc., are very largely insectivorous. When feeding along the seacoast they devour hundreds of worms which are destructive to oysters. Along inland waterways they take crayfishes which are so injurious to embankments and various crops.

At least nine species of them are known to feed upon mosquitoes, a service for which mankind should be very thankful. They befriend cattle by eating horseflies and their larvæ, and Texas fever ticks. They feed also on many crop pests, as the boll weevil, clover weevil, alfalfa weevil, bill bugs, cutworms, grasshoppers, army worm, cabbage worm, cotton worm, cotton cutworm, rice weevil, wireworms, and cucumber beetles. This good record has not prevented the slaughter of these species in season and out of season, and some of them have been practically exterminated.

The nature of the food of the hawks and owls has been discussed above, but these birds are aberrant members of the tribe. The majority of raptorial birds are beneficial. Never was a more mistaken policy pursued than the indiscriminate shooting of hawks and owls. Only a year ago the writer accompanied a

Texan, who in spite of protests would shoot a sparrow hawk, saying it was an enemy of his poultry. I pointed out the improbability of this, from the bird's small size, and said, what is well known, that they live principally on grasshoppers, but to no avail; the bird was shot. I promptly opened the stomach, which was crammed with grasshoppers. A game



FIG. 178. Companions in search of food; downy woodpecker (above) and white breasted nuthatch (below), at a feeding station.

keeper came upon an owl in a trap about which were remains of a score of meadow mice which had been brought by the bird's mate, yet the owl was killed.

The woodpeckers (except sapsuckers), from their close association with trees are the chief bird conservators of our forests. They are fitted by nature to capture the destructive wood-boring grubs and they make good use of their talents. They are very fond of both round- and flat-headed borers, carpenter worms, codling moth larvæ, and the eggs of other forest pests also are eaten. They are engaged in a good work and with few exceptions should be rigorously protected.



FIG. 179. The tree swallow is one of the almost wholly beneficial birds.

The whip-poor-wills, fluffy-feathered, noiseless-flying birds, catch their prey, chiefly moths and large beetles, by short dashes from perches near or on the ground. The nighthawks scour the morning and evening skies, and the chimney swifts hunt by broad daylight. These wide-mouthed birds scoop in insects of all sorts; anything engulfable seems to be taken. Sometimes these birds get more than fifty different kinds of insects at a meal, and the number of individuals may be far over a thousand. One nighthawk stomach is said to have yielded 600 mosquitoes, besides other insects. These birds deserve the

very best of protection, yet under the name of bullbats they have been ruthlessly shot for sport and food in the South and wantonly for practice at wing shooting in the North. Their numbers have been very seriously reduced by this worse than folly—yet they stand with no superiors as bird friends of the human race.

Still another group of highly insectivorous birds are the flycatchers. With the exception of the large and gorgeous scissor-tail of the South, they are mainly plain colored species. They have the very characteristic habit of swooping upon their

insect prey from some favorite perch, to which they return. The capture of the flying prey is usually announced by a sharp snap of the beak. Some of these birds, as the kingbird or so-called bee martin, are accused of taking many honey bees, but it has been found as a rule that chiefly drones are eaten. Hence more good than harm is done. Most of the species of this family are very pugnacious toward hawks and crows, and do much to protect not only their own nests but those of their bird neighbors. The food of flycatchers comprises a wide variety of insects, and there is no doubt that most of the species do far more good than harm.

The wrens, familiar to all, with their pert, brisk ways, are

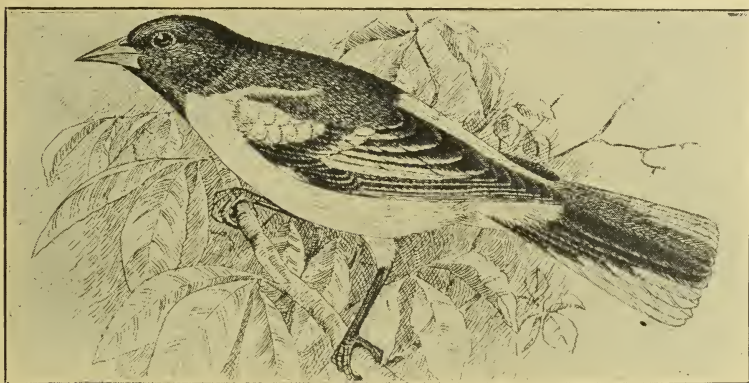


FIG. 180. A chiefly useful bird; the Baltimore oriole.

highly insectivorous and exceedingly industrious in seeking out their favorite food. The thrashers are more fond of fruit, sometimes too much so, apparently, but at present it is believed that the balance of utility is in their favor.

The little birds known as creepers, nuthatchers, titmice, chickadees, bush-tits, wren-tits, gnatcatchers, and kinglets, may be considered together economically. All are closely associated with trees and shrubs, all search thoroughly some or all parts of their leafy homes for small insects or their eggs, and without exception they are beneficial. The similarity of their diets often leads them to flock together, and a mixed flock of these feathered mites is one of the cheeriest companies imaginable. Busily gathering the savory tidbits which are as luscious to them as a bon-bon to us, they keep up a conversational chattering and chirping that not only evidences

their own contentment and joy of living, but inspires the same sentiments in the fortunate human observer of their happy parties. These flocks are the guardians of trees in winter. Scale insects and insect eggs are favorite morsels of these little hunters, and bark-beetles, leaf-beetles, plant-lice, tent caterpillars, cankerworms, codling moth larvæ, gypsy and brown-tail moths, are among the pests they consume. They deserve every protection and encouragement.

The thrushes like quiet woodlands, sometimes even deep forests. They are fond of wild fruits, a trait of neutral economic significance—but they relish insects also and come enough in contact with those injurious to man's interests to make a commendable economic record. Wireworms, cutworms, cankerworms, codling moth larvæ, gypsy and brown-tail moths, tent caterpillars, rose beetles, and other pests are consumed by them.

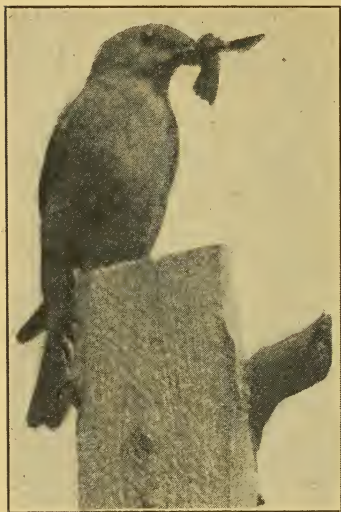


FIG. 181. Bluebird; a very useful species.

The bluebird, known and beloved by all, richly deserves by good deeds the esteem with which affection alone has almost universally enshrined it. Besides the wild fruit it takes from choice in season, and from necessity during the bleak winters

which it chooses to brave, the bluebird feeds upon a great variety of insects. Cutworms, cankerworms, grasshoppers, chinch bugs, bill bugs, chestnut weevils, locust-leaf miner, clover leaf weevil, clover-root weevil, salt-marsh caterpillar, and yellow-bear caterpillars, are among the injurious forms devoured.

Information concerning the value of birds is far from complete, yet we know enough to be fairly sure of the estimated numbers of beneficial and injurious species given above. We have, then, about eight good birds to every one of the half-beneficial, half-injurious group, and about forty-seven birds to every one of the chiefly bad group. It is probable, furthermore, that future investigation will add to the favorable side of this

account rather than the reverse. However, as stated in the introductory paragraph of this article, birds are protected primarily, not because of laws framed in accordance with economic aspects of avian life, but from affection.

The desire to protect long preceded the establishment of legal means to enforce protection. This favorable attitude of the public toward bird protection has been cultivated and intensified by the work of the state and national Audubon societies, and the demand for protection from an economic stand-



FIG. 182. Canvas back ducks are valuable as objects of sport and for food, but not because of their food habits.

point has been so enforced by the investigations of the Biological Survey that bird protection rests upon a firmer foundation and is more thoroughgoing in the United States than in any other part of the world.

THE CLIMATE OF KANSAS.

By S. D. FLORA, meteorologist, U. S. Weather Bureau, and Kansas State Board of Agriculture, Topeka.

KANSAS, lying as it does in the geographical center of the United States, far removed from any large body of water, and extending as a rolling and gradually rising slope from the fertile valley of the Missouri almost to the foot hills of the Rockies, naturally has a typically continental climate; one that is characterized by extremes of temperatures, great variations in the seasonal rainfall, much sunshine, and dry, bracing air, with good wind movement—a climate that is productive of bountiful cereal crops, rolling prairies, and vigorous health.

TEMPERATURE.

The average annual temperature ranges from 58° F. in the southeastern counties to 51° in the northwestern, with a mean of 54° for the state as a whole, which is lower than that of almost any other part of the country east of the Rockies. The coldest month is January, with an average temperature of 30°, though the extreme temperatures of the winter often occur in February. After that there is an irregular but general warming up until the latter part of July or the forepart of August, often forcing vegetation dangerously ahead of the season in March. July has the highest average temperature, 78°, but the summer heat is generally more oppressive in August, owing to the decreased wind movement that month, and a general lowering of the power of the human body, after a summer's heat, to resist high temperatures. The eastern half, in common with the rest of the corn belt, often has a period of uncomfortably warm nights during the summer months, but in the western half the summer nights are almost always delightfully cool and pleasant. Beginning about the last week in August, the cooler weather of fall makes its appearance, and, with the exception of occasional hot days in September, ushers in the most delightful season of the year, often terminating in a period of Indian Summer, which probably is not surpassed as ideal weather in any part of the globe. Rigorous winter seldom sets in before the last ten days of December.

The daily range of temperature varies from 20° to 25° F. in the eastern part of the state to 30° in the western part, where ranges of 50° to 60° between day and night temperatures are not uncommon.

The warmest month in the meteorological history of the state was July, 1901, with an average temperature of 85° for the state as a whole, and the coldest was January, 1912, with an average of 19°, though this was closely approached in January of 1918. The warmest summer in the history of the state was in 1901, but the average temperature from June 1 to September 10 during the great drouth year of 1913 is higher than that of any similar period since the state record was begun. The record of a mean maximum temperature of 107° at Clay Center, during August of that year, has doubtless never been exceeded in the United States, save only at a few of the hottest points in the desert region of the Southwest. The highest

temperature ever recorded by properly exposed thermometers in the state is 116°, which occurred at Clay Center and Hugoton on June 25, 1911, and at Farnsworth (now designated as Healy) on July 13, 1913.

The coldest four-month period extended from December, 1911, to March, 1912, inclusive. The lowest temperature on the state record is 40° below zero, which occurred at Lebanon on February 13, 1915.

It should be stated, in view of the somewhat startling extremes given above, that both the high temperatures of summer and the low temperatures of winter are usually of only short duration, and the extremes for the state generally occur in the western counties and when the air is very dry, which mitigates to a considerable degree the discomfort from them.

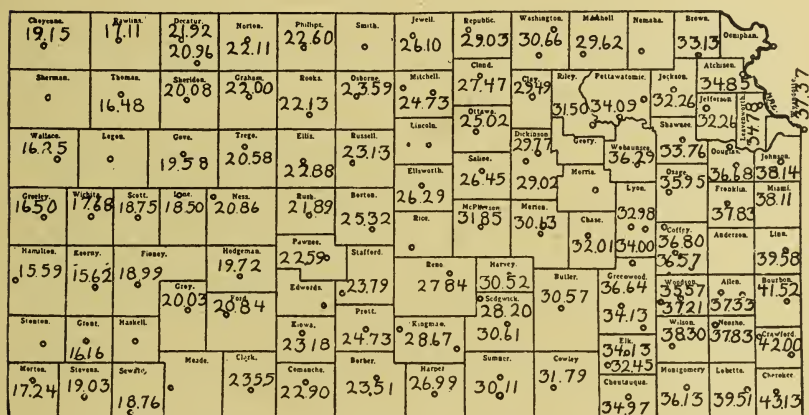


FIG. 183. A precipitation chart of Kansas. The amounts given include rain, melted sleet snow, and hail. These are the normal or average amounts, and none of the records used in obtaining them cover less than ten years. In many cases the periods covered exceed forty years.

PRECIPITATION.

The distribution of the annual precipitation over Kansas and the time of its occurrence is the chief limiting factor of crop growth and receives more attention than any other feature of the weather. The precipitation decreases with a remarkable regularity from 42 inches in the southeastern counties to just a little more than 15 inches at the Colorado line. The northern half of the state receives practically the same amount as the southern, except that the northeast quarter receives slightly less than the southeast.

Over the eastern half of Kansas the annual precipitation equals that of Iowa, Wisconsin, and Michigan, and is only a little less than that of Illinois, Indiana, or Ohio. It occurs at a more opportune time of the year than the precipitation of any of these states. From 71 to 78 percent of the annual amount falls over the state during the six crop-growing months, April to September, inclusive, and there is no state in the country, except a few along the Gulf Coast, that, taken as a whole, receives as much rain during the summer



FIG. 184. A snow drift in Kansas. This picture was taken February 16, 1919. The man is seated over a fair sized cherry tree and the bank was 18 feet high. Drifts of this kind sometimes obstruct transportation in winter months.

months as the eastern third of Kansas. Even the middle third of the state receives slightly over 20 inches during these six months, which is within two inches of the amount that falls during the same period in Illinois, Indiana, Ohio, New York, and the New England States. The western third, the "semi-arid region,"—the "short-grass country"—has an average precipitation of more than 16 inches for the period, which almost equals the amount during these six months in Michigan and Wisconsin, and is approximately three-fourths of the average for Iowa for the same period.

The least average amount of precipitation occurs in January, after which there is a steady increase in the normal monthly amounts until June, when the average for the state ranges

from almost six inches in the southeastern counties to approximately two inches and a half along the Colorado line, and measurable rain falls in all parts on an average of one day out of three. After June there is a steady decrease in the normal precipitation to the end of the year, though the heaviest downpours usually occur from July to September. Torrential rains of from 5 to 10 inches have occurred this time of the year in many parts of the state, even the extreme western counties. The heaviest 24-hour amount of record is 10.33 inches, which occurred at Moran on September 7, 1915.

The average annual snowfall of the state ranges from 11 inches in the extreme south-central counties to two feet in scattered localities farther north. As a rule the ground is not covered with snow more than a few days at a time, but when it falls with a high wind it drifts badly and is a serious obstacle to transportation. A deep snow that lays on the ground a long time is one of the most favorable features for a large yield of wheat, the principal crop of the state. Floods in the principal streams are seldom, if ever, caused by melting snow.

In connection with the decrease of precipitation towards the western part it is interesting to note that over 50 percent of the state's yield of corn and wheat—its two most important crops—is produced in the middle third, where the annual rainfall normally ranges from 20 to 32 inches and drouths are more frequent than in the eastern part. Even some of the extreme western counties have within recent years ranked well towards the top in production of these two crops.

DROUTHS.

Damage by drouth in Kansas usually occurs during July and August and is due largely to the high rate of evaporation caused by an excessive amount of sunshine and hot, drying winds. Records compiled for the 20-year period ending with 1914 show that in the eastern part periods of 30 days without more than 0.25 inch of rain within 24 hours have occurred during the growing season—April to September, inclusive—on an average of about one year in two, which is the average for other important corn-growing states, but in the western part rainfall is inclined to be irregular, as to both time and place of occurrence, and 33 such periods have occurred in the 20-year period.

Until the state-wide meteorological record was begun in 1887 records of drouths have been fragmentary, but the most not-

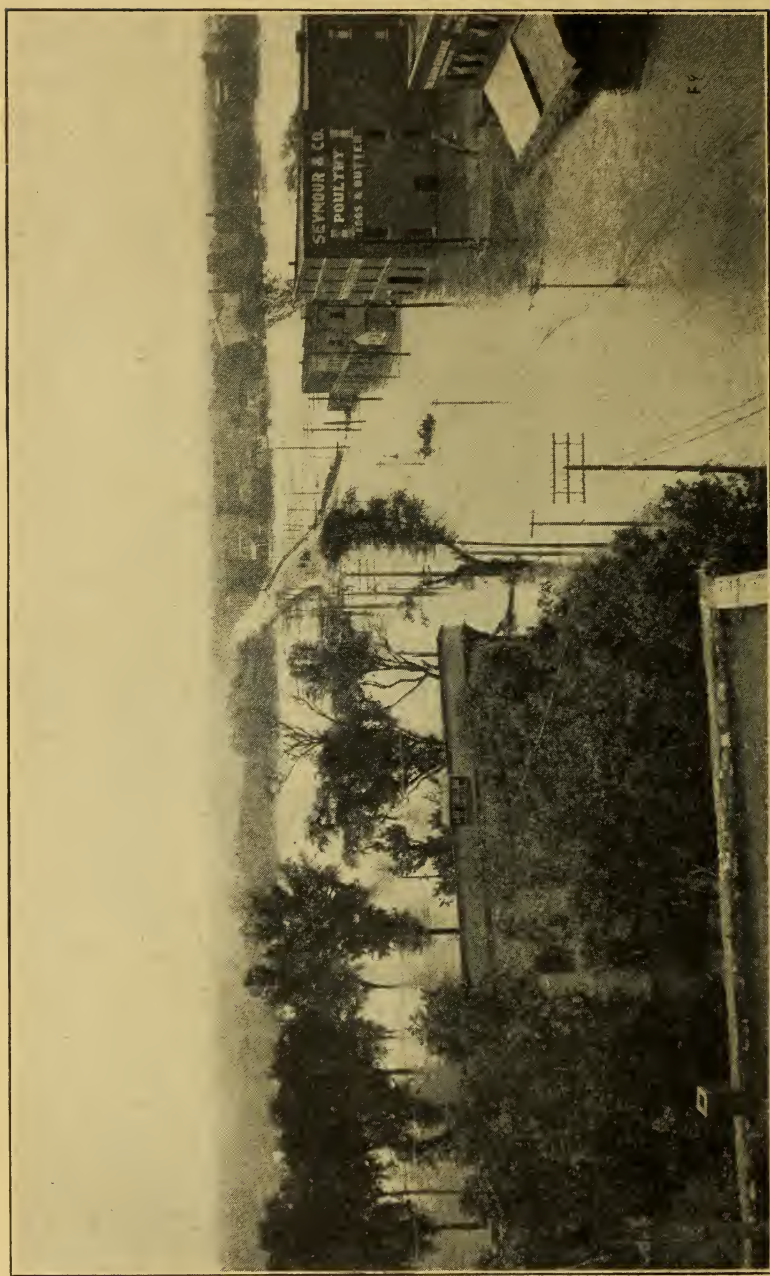


FIG. 185. Kansas river at Topeka during 1903 flood. Plains streams, having shallow channels and draining wide areas, occasionally overflow in times of excessive precipitation.

able prior to that time were those of 1860, 1864-65, and 1874, the last one mentioned being known to old settlers as "grass-hopper year." Since 1887 the most severe drouths are those of 1901, 1911, 1914 and 1917. In 1901 the eastern portion of the state had but 16 percent of its normal precipitation from April 14 to July 25, and the deficiency was intensified by the excessive heat, the summer being the hottest on record. During the drouth of 1911, which had its beginning in 1910 in the southeastern part of the state, the rainfall during the six crop-growing months, April to September, was, with two exceptions, the least since 1887, and the effect of this was intensified by the fact that June of that year was the hottest on record.

The drouth of 1913 was in all probability the most damaging the state ever experienced. The three summer months, June, July and August, were drier than the summer months of any other year since the record was begun, and came within a fraction of a degree of being the hottest. Available records of early drouths indicate that, with the possible exception of 1874, the summer of 1913 was the driest ever experienced by white men in Kansas. There was no part where the drouth was not felt greatly, and it was especially damaging on account of the fact that it was not broken until September 10, when it was too late to benefit even late corn and vegetables.

The drouth of 1917 was most severe in June and July, which together made the driest two-month period for that time of the year, and completed a 12-month period that came within a fraction of an inch of having the least precipitation of any such period on record in the state.

FLOODS.

The rainfall of eastern Kansas during the warm season is normally heavier than in almost any other part of the country, and exceptionally heavy rains falling at this time have been the cause of all the serious floods Kansas has experienced. The melting of the snow cover at the close of winter, either in this state or at the headwaters of its streams in Colorado, is never the cause of any serious apprehension in this connection. The drainage areas of the principal streams are immense in comparison with the size of the river channels, and continued heavy rains over large areas, which are most liable to occur in May and June, often start disastrous overflows, as the banks are generally low and the courses of the streams tortuous. As

a rule these floods are caused by rains east of the center of the state. Torrential downpours, which sometimes occur in July and August, and September, seldom cause overflows in the larger streams, for the reason that they are always local and fall on ground that has been dried by the heat of summer.

Among the most noteworthy floods on record are those of 1844, 1903, 1904, 1908, and 1915 in the Kansas River watershed, and those of 1826, 1844, 1855, 1903, 1904, and 1909 in the Neosho and Marais des Cygnes watersheds. The flood of 1844 in the Kansas river valley, which also devastated the Missouri valley, represents the highest water known in these valleys, though records of it are quite fragmentary, as the state was settled only by a few pioneers at that time. The flood of 1903, while lacking two feet of reaching the high mark of 1844 at Kansas City, the only place where a definite comparison was possible, caused more damage to property and loss of lives than any other overflow Kansas has ever experienced, owing to the fact that between the time of these two floods the valleys in question had become thickly settled and great commercial enterprises had grown up. Next to the flood of 1903, that of 1908 was the most damaging to property interests in the valley of the Kansas river proper, while that of 1905 was especially severe in the valleys of the Republican and Solomon, where property damage was estimated at close to four millions of dollars.

WINDS.

The prevailing direction of the winds that blow across Kansas is from the south from April to October, inclusive, except in the southwest portion, where they are from the southeast during April, May and June. During the winter months north or northwest winds prevail, though south winds are frequent.

The difference between the velocity of the wind in the eastern and western portions is almost as great as the difference in rainfall. The winds over the eastern third are not noticeably higher than those that blow over other states between Kansas and the Atlantic, while the western third is one of the windiest inland localities in the country. In all parts April is the windiest month and August has the least air movement. There is a marked variation in the average velocity. The highest winds occur near the warmest hours of the day and the lowest about sunrise. High, northerly winds often precede and ac-

company the advent of cold waves, but "blizzards" are exceedingly rare.

The most damaging winds are the "hot winds." These usually occur during a prolonged heated period and are commonly described as being "like the wind from a furnace." They occur with shade temperatures of from 100 to 116, often have a high-velocity, and cause great injury to growing crops, in extreme cases having been known to kill the bark and foliage on the south side of trees. They are of very irregular occurrence and data relative to them are insufficient to determine whether there has been any increase or decrease in their frequency of occurrence within historic times.

Tornadoes occur in Kansas practically every year and often several in that length of time, but the territory devastated by a storm of this nature is quite small. The months of greatest frequency for these storms are April, May, and June, but they have been known to occur in all months of the year, except January and December.

FROSTS.

The growing season is sufficiently long to give ample time for the development and maturing of the principal crops of the state, but sometimes an extended period of warm weather in March or April, especially March, will force vegetation so far ahead of the season that great damage results from a late frost in May. This applies especially to fruit and early vegetables. Only in rare instances do the first killing frosts of autumn occur early enough to cause serious damage.

The average date of the last killing frost in spring ranges from April 7 in the extreme southeast to the first week in May in the northwest, and killing frosts have been known to occur over nearly all the western and north-central counties as late as May 27. The average date of the first killing frost in autumn ranges from the first week in October in the northwestern counties to October 22 in the southeastern counties, and killing frosts have occurred in September in practically all parts. On account of the extreme dryness of the air in the western section instances often occur where the temperature falls to freezing, or even a few degrees lower, without the deposit of frost or any damage to the most tender vegetation.

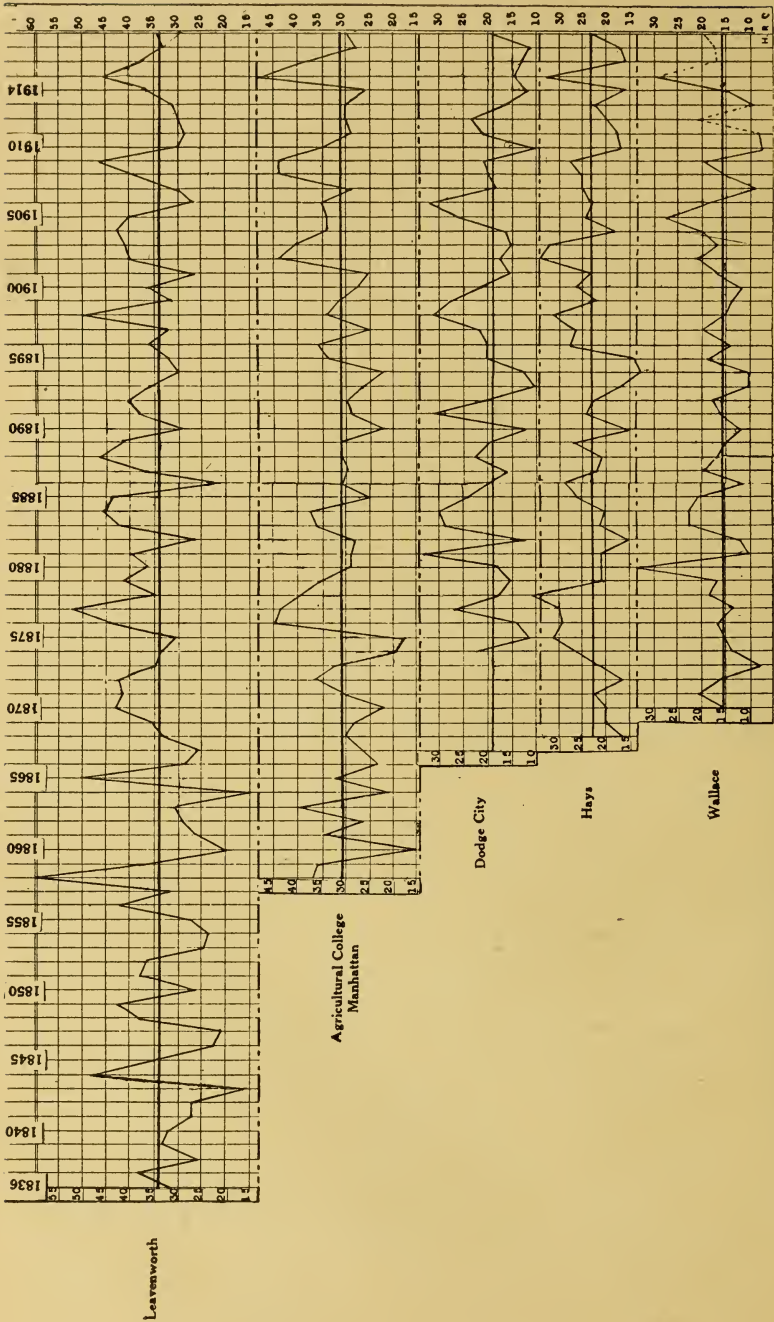


FIG. 186. Diagram illustrating the fact that though precipitation varies from year to year, in the long run it has not increased. The precipitation in inches is shown at either side. The stations where the observations were made are shown at the left; the years at the top.

SUNSHINE AND CLOUDINESS.

The sunshine that Kansas receives each year is one of its greatest climatic assets and also one of the reasons why drouths are so severely felt. Practically no other part of the country that receives so much rainfall during the growing season is favored with so high a percentage of sunshiny days, which makes for the rapid growth of crops. July and August are the sunniest months, with averages at weather bureau offices, where automatic records are kept, from 73 to 81 percent of the possible amounts. The least sunshine of the year occurs in January and February, when the averages range as low as 52 to 64 percent of the possible amounts.

Of the fully equipped stations of the weather bureau in Kansas, including one at Kansas City, Mo., where records of cloudiness have been kept from 25 to 38 years, none has an average of less than 144 clear days or more than 101 cloudy days annually. At Dodge City, which represents conditions in the western part of the state, there is an average of but 61 cloudy days per year.

SOME FALLACIES.

With the exception of the high character of its people, the greatest asset of Kansas is its climate. Yet, there seems to have been an unfortunate tendency from the first settlement to exaggerate spectacular and unfavorable features. There are drawbacks to the climate of all parts of the world. Other states seldom advertise their unfavorable features, but the terms of "drouthy Kansas" and "Kansas cyclone" have been used so often that they have become familiar to persons in many parts of the country. More than one man has come to Kansas with fear in his heart that he and his family would be carried away in one of the widely heralded "cyclones," or has expected to find a perennially drouth-stricken country, and has found instead broad and well-cultivated fields of flourishing crops, that betoken a plenteous water supply, and peaceful farm houses that have basked in the sunlight for many years without a storm of sufficient severity to disturb the serenity of the people that live in them.

On the other extreme are the "boomers," who make many claims that the climate of the state is steadily improving, that the rainfall is increasing year by year, the winters getting

milder and the summer heat and hot winds gradually becoming things of the past, while violent storms, hail, and flood, are to be classed with the boggy man of childhood. These men are unable to substantiate their claims with reliable proof.



FIG. 187. Kansas has received an unmerited reputation for tornadoes. They are not more liable to occur in any given area in Kansas than in any similar area in Missouri and Iowa, and they are only slightly more frequent in Kansas than in Illinois. The Kansan's chance of being hit or having his property destroyed by a tornado is one in 1,600.

One of the most important things to be remembered is that Kansas is of great size in geographical extent, as well as in many other ways. There is room within its borders for many varieties of weather, which are more or less local in their occurrence, though they are often reported to the world as though they covered the entire state. Drouths, for instance, are often so severe in limited sections of the state that crops are a total

failure and stock has to be shipped to other places for feed and water, while crops in other counties may be promising. Tornadoes that sometimes occur here, as elsewhere in the middle west, leave death and destruction in their wake, but are so local in their occurrence that the path of one can generally be represented on a fair-sized-map of the state by a pin scratch half an inch long.

To give Kansas credit for being a "cyclone state" is as erroneous as to use the term "cyclone" instead of tornado to designate these violent storms of the funnel-shaped cloud. That such storms do occur in Kansas practically every year cannot be denied, but so far as shown by data collected by the weather bureau, there is no reason to think they are any more liable to occur in any given area in Kansas than in any similar area in Missouri or Iowa, and they are only slightly more frequent than in Illinois, which certainly does not have this undesirable reputation. The chance of a Kansan meeting death or having his property destroyed by a tornado is very much less than is commonly supposed. Professor Henry, of the weather bureau, who has made one of the most comprehensive studies of these storms, states that "for any specific area or farm of one square mile, the probability of being visited by a tornado is less than one sixteenth of one percent per century," which means less than one chance in 16 hundred years. During the 12 years for which definite information is available about these storms the number of deaths due to them has been less than the number caused by lightning and much less than the number due to any of the diseases of common occurrence.

A very common fallacy held by persons who have lived in Kansas for a long time is that the climate has changed and is changing materially, that the rainfall is gradually increasing, if not in volume, at least in frequency, and that the high winds are gradually decreasing and cold winters and hot winds of summer becoming a thing of the past. It seems difficult to explain how the western part of the state, once a part of "the Great American Desert," could have become an important crop-producing section unless the rainfall had increased correspondingly, yet rainfall records made there almost since the first settlement entirely fail to bear this out, as they do not show any material difference between the amounts that fell during the early days and those of the present time.

Whether there is a tendency for rains to fall oftener instead of in heavy downpours is another contention, and it is not so easily disposed of, though so far no one has been able to demonstrate it by a study of the numerous authentic rainfall records that are available. A table giving the heaviest 24-hour falls of rain on record at about 75 stations scattered over the state, that has recently been prepared, shows in many instances the record amounts have occurred within recent years, and it is well known that the most severe drouths in the history of Kansas have occurred in the past eight years.

It is a characteristic of any one to remember unusual events. A heavy rain, an unusually cold spell, snow that lay on the ground all winter, or a drouth that ruined the crops, makes an impression on the mind that persists long after ordinary events are forgotten. This is especially true in Kansas, where the early settlers were poorly protected from the inclemencies of the weather and still more poorly prepared in a financial way to undergo a crop failure caused by a drouth. Actual records of events often show things in a different light from the way the mind recalls them. The winter of 1911-12, only six years ago, was the coldest in the state's record, and the winter of 1917-18 was a close contestant for this undesirable distinction, while the drouth of 1913, only five years ago, was the most severe in history, with the possible exception of 1874. Doubtless, many old settlers can recall winters when there was more suffering from the cold than the one just mentioned and a great many summers, especially 1860 and 1864, when the shortage of crops due to drouth was a more serious matter than it has been in recent years.

Ending the delusion of changing climate has its compensations, however. If the climate has not changed since the state's history began, it is reasonably certain it will not change in the course of many generations, and that, as the state has maintained a high rank in crop production and wealth, in spite of adverse weather during the past eight years, there is every reason to think that, from a climatic standpoint at least, its prosperity is built on a solid foundation.

PROCEEDINGS

OF THE FORTY-SIXTH ANNUAL MEETING OF THE KANSAS
STATE BOARD OF AGRICULTURE, HELD IN TOPEKA,
JANUARY 10, 11, AND 12, 1917.

WEDNESDAY, January 10, 1917.

The meeting was called to order by President J. T. Tredway, at four o'clock p. m., in Memorial Hall.

The roll was called by the secretary, and a quorum was found present, including the following-named officers and members: President J. T. Tredway, Vice President R. B. Ward, Treasurer A. W. Smith, Secretary J. C. Mohler, H. S. Thompson, Charles E. Sutton, I. L. Diesem, O. O. Wolf, H. W. Avery, T. A. Hubbard, E. L. Barrier, H. M. Laing, E. E. Frizell.

On motion, duly seconded, the following committees were appointed by the president:

Committee on Credentials: I. L. Diesem, Finney county; T. J. Anderson, Allen county; Ira D. Brougher, Barton county; G. J. Stauth, Ford county; and T. A. Hubbard, Sumner county.

Committee on Resolutions: A. L. Sponsler, Reno county; E. L. Barrier, Greenwood county; E. A. Millard, Cowley county; L. M. Penwell, Shawnee county; and E. E. Frizell, Pawnee county.

The minutes of the meeting of January 12-14, 1916, were read by the secretary, and on motion approved.

On motion the program as prepared and printed by the secretary was adopted as the official program of the meeting.

The Committee on Credentials made its report, showing the following-named as duly authorized delegates to the Forty-sixth Annual Meeting of the Kansas State Board of Agriculture: Thos. J. Anderson, Allen county; G. H. Ford, Allen county; Ira D. Brougher, Barton county; C. A. Babbit, Brown county; J. A. Glace, Clay county; Eugene Elkins, Clay county; G. G. Hill, Cloud county; W. H. Nation, Coffey county; J. M. Henderson, Cowley county; E. A. Millard, Cowley county; S. J. Morrish, Decatur county; J. T. Sellards, Dickinson county; C. W. Murphy, Douglas county; Fred R. Lanter, Elk county; E. G. Finnup, Finney county; G. J. Stauth, Ford county; E. S. Kirkpatrick, Franklin county; H. B. Ball, Franklin county; J. W. Phelps, Gray county; William Bays, Greenwood county; Charles H. Wickham, Harper county; Ralph Snyder, Jefferson county; Fred Greim, Labette county; J. M. Williams, Lincoln county; L. L. Moore, Logan county; C. J. Brown, Marshall county; W. Knaus, McPherson county; H. N. Holdeman, Meade county; A. G. Logan, Mitchell county; E. I. Burton, Montgomery county; W. H. White, jr., Morris county; J. P. Koelzer, Nemaha county; C. D. Resler, Neosho county; W. H. Miller, Ness county; B. V. Wheeler, Norton county; R. C.

Gafford, Ottawa county; J. G. Edwards, Pawnee county; Abram Troup, Phillips county; J. E. Hardesty, Pratt county; A. L. Sponsler, Reno county; J. G. Lofy, Republic county; Bert Craig, Riley county; F. M. Smith, Rooks county; W. C. Holmes, Rush county; Johnson Workman, Russell county; J. B. Funk, Russell county; W. H. Todd, Saline county; L. M. Penwell, Shawnee county; G. L. Calvert, Sherman county; W. H. Lewis, Smith county; R. B. McKay, Stafford county; C. H. Benson, Trego county.

Dr. G. Bohrer, of Chase, Kan., made a few remarks relative to the bee industry and its needs in the way of legislation and appropriations from the 1917 session of the Kansas legislature.

Adjourned until 7:30 p. m.

WEDNESDAY EVENING SESSION.

President Tredway called the meeting to order in Memorial Hall, at 7:30 p. m.

Prayer was offered by Rev. S. B. Alderson, pastor of the Third Presbyterian Church, Topeka.

Charles Sessions, secretary to Governor Capper, delivered an address of welcome on behalf of the state, and Mayor J. E. House one for the city of Topeka, President Tredway responding for the Board.

President A. Ross Hill, of the Missouri State University, delivered an address on "A Twentieth Century Vision."

On motion of T. A. Hubbard a vote of thanks was tendered to President Hill for his very able address.

Music was furnished during the evening by the Washburn Glee Club.

Adjourned until nine a. m.

THURSDAY MORNING, JANUARY 11, 1917.

The meeting was called to order by President Tredway at nine a. m., and prayer was offered by Rev. A. S. Embree, Topeka.

The roll was called by the secretary.

Papers were read by W. R. Mellor, secretary of the Nebraska State Board of Agriculture, Lincoln, on "The Agricultural Fair"; and J. H. Mercer, state livestock sanitary commissioner, Topeka, on "The Foot-and-mouth Disease." Charles E. Lobdell, member of the Farm Loan Board, Washington, D. C., addressed the meeting on the subject of "The Federal Farm Loan Act."

Adjourned until 1:30 p. m.

THURSDAY AFTERNOON SESSION.

The meeting convened pursuant to adjournment, President Tredway in the chair.

George W. Marble, of Fort Scott, discussed the topic, "Could Kansas be a Dairy State?" and papers were read by T. A. Borman, editor of the *Kansas Farmer*, Topeka, on "How to Farm in Kansas and Why"; and by A. L. Stockwell, Larned, on "The Farm Flock for Kansas."

Adjourned until 7:30 p. m.

THURSDAY EVENING SESSION.

The meeting convened with Vice President R. B. Ward in the chair.

Papers were read by Cora Wellhouse Bullard, Tonganoxie, on "Rural Permanency," and by Charles Dillon, managing editor Capper farm papers, Topeka, on "The Farmer and His Paper."

Adjourned until nine a. m.

FRIDAY MORNING, JANUARY 12, 1917.

The meeting convened, President Tredway in the chair.

Prayer was offered by Rev. M. F. Troxell, pastor of the English Lutheran Church, Topeka.

The roll was called by the secretary.

Papers were read by Z. G. Hopkins, special representative of the M. K. & T. Railway, St. Louis, on the "Relation of Transportation to Agriculture," and by Charles R. Weeks, Superintendent of the Hays Station, on the "Work of the Hays Experiment Station." Through the courtesy of the Kansas Moving Picture Censor Board moving pictures of the Hays Station and points of interest in the surrounding country were shown in the censorship rooms at the statehouse following the paper presented by Mr. Weeks.

Adjourned until two p. m.

FRIDAY AFTERNOON SESSION.

The meeting convened in Memorial Hall pursuant to adjournment, President Tredway in the chair.

The secretary called the roll; a quorum was present.

The Board proceeded at once to the election of officers and members, the election resulting as follows:

A. L. Sponsler nominated J. T. Tredway to succeed himself as president for the ensuing year, and on motion, the rules were suspended and the secretary instructed to cast the unanimous vote of the Board for Mr. Tredway, which was done, and Mr. Tredway was declared elected.

J. G. Lofy nominated R. B. Ward for the office of vice president to succeed himself, and on motion the rules were suspended and the secretary instructed to cast the unanimous vote for Mr. Ward, which was done, and he was declared elected.

In like manner, A. W. Smith was nominated for the office of treasurer by T. A. Hubbard, and elected by a unanimous vote.

H. S. Thompson, of Reno county, was nominated by A. L. Sponsler to succeed himself as a member for the ensuing two years. On motion the rules were suspended and the secretary instructed to cast the unanimous vote for Mr. Thompson, which was done, and he was declared elected; and in like manner I. L. Diesem, of Finney county, nominated by E. L. Barrier, O. O. Wolf, of Franklin county, nominated by E. S. Kirkpatrick, and H. W. Avery, of Clay county, nominated by Charles Wingrove, were elected to succeed themselves as members for the ensuing two years.

E. I. Burton, of Montgomery county, was nominated by E. E. Fritzell to succeed Charles E. Sutton, as a member, and on motion, the rules were

suspended and the secretary instructed to cast the unanimous vote of the Board for Mr. Burton, which was done, and he was elected.

J. A. Shoemaker, rural school supervisor, Topeka, read a paper on "The Standardization of Rural Schools."

The Committee on Resolutions presented the following resolutions for consideration:

WHEREAS, The Secretary of our Board has secured the names of all the owners of pure bred stock in the state of Kansas; and

WHEREAS, The value of Kansas livestock now represents \$341,000,000 of taxable property, and this valuable asset is justly due to our enterprising farmers engaged in improving our native stock, by means of pure-bred animals, and improved methods of livestock husbandry: Therefore, in recognition of this invaluable service in behalf of the resources of our state, be it

Resolved, That the Secretary of the State Board of Agriculture is hereby authorized to compile a clasified Kansas Breeders' Directory from this list of names of the breeders of pure-bred livestock, and recommend that the legislature appropriate sufficient funds to carry on this work.

Resolved, That we earnestly ask of the present legislature that it amend Chapter 177 of the Laws of 1915, entitled "An act requiring the county commissioners to assist in payment of premiums for agricultural fair associations, . . ." etc., so that it will include counties having a population of between 30,000 and 40,000 inhabitants and conform to the provisions of the law as it now relates to other counties.

WHEREAS, The President of the State Board of Agriculture is by virtue of his office a member of the State Schoolbook Commission and served in that capacity with distinguished ability: be it

Resolved, That we congratulate him upon his success as a member of that important commission, and that the wisdom of the present law is established by its successful and satisfactory administration, and we favor the continuation of the policy of the present school book commission and the publication of school text books by the state under the law as it is.

We, the delegates assembled with the State Board of Agriculture, congratulate this Board upon its work for the past forty-six years as a department of state government and would advise no drastic change in the law relating to the character of its organization. Its past is inseparably connected with the history of this commonwealth and constitutes many a bright and valuable page—its present work is efficient and the state is altogether too economical and we would respectfully ask the legislature to increase its appropriation for the advanced and progressive work demanded of the secretary by the people.

We would further commend to the legislature an amendment to the law, however, which will enlarge the representation to the annual meetings of this Board, which may include representatives from the various state breed associations and county institutes.

Resolved, That we favor such legislation for the protection of the bee industry of Kansas as will effectually eradicate infectious disease in the apiaries of the state, which would result in materially aiding one of the large and useful branches of agriculture.

The following resolution was presented by E. L. Barrier, and on motion was added to those presented by the Committee on Resolutions:

Resolved, That we heartily commend the efficient work of Secretary Sponsler and the Board of State Fair Managers in building up one of the greatest agricultural and livestock exhibitions in the West.

On motion, duly seconded, all of the resolutions presented were unanimously adopted.

The following letter was read by the secretary:

Mr. President, Members and Delegates of the State Board of Agriculture:

God created man and woman; He gave them mental and physical power; He gave them dominion over all the earth and what is on the earth to develop it for the glory of God and benefit of the human race. Something over sixty years ago when I first came to Kansas this land was occupied by a race that did not make use of the powers that God bestowed on them, consequently the state was not improved. In the year 1854 the United States government of America opened the state for white settlers; then the state was improved; the farmers began to cultivate the soil and crops raised the interest. Agriculture advanced rather slow because of the many difficulties the early settlers had to contend with. A great many had to carry the gun to keep peace within the land. They could not follow the plow. Kansas never developed very fast until after the close of the Civil War, when peace was declared and the boys that wore the blue came home and brought others with them. Then the sod was turned over and planted in all kinds of grain and the produce of the crops developed the state and it has been doing it ever since. So Kansas is to-day one of the best states in the Union and this was all done by the tiller of the soil.

Agriculture was the first and is to-day one of the principal occupations. The farmer raises the wheat men eat and the raw material for what men wear. Without the farmer we could not exist. There is plenty of room yet for the interest of agriculture to advance. In the early days most of the work was done by hand, that was a great deal harder on the farmer, but in these days the work is done almost exclusively by machinery. So, consequently, the farmer should have more time to till the soil better. They should take care of their farm implements better and should house them; they should take better care of their crops after they are raised and keep up the fertility of the soil so it will produce more by taking care of the manure and hauling it out on the land and by raising clover and alfalfa and plowing it under—that will help keep up the fertility of the soil. The farmer should raise well-improved stock, as it will keep up the fertility of the soil, and if they are managed properly the farmer will realize a good revenue from them. We are not all born alike. Some have more talents than others, but we must use what we have to the best of our ability and God will do what is beyond our power. There are a great many successful farmers in Kansas and I would advise those that have not been successful to get acquainted with those that have been successful and see how they manage. Let us be loyal to the nation and to the state and build up the interest of agriculture; then our state will be a pleasant place to live in.

HAMLIN, Brown County, Kansas.

Yours truly,

PETER PFEIFFER.

Papers were read by Thos. H. McDonald, chief engineer of the Iowa State Highway Commission, Ames, on "Fixing the Responsibility of Road Improvement"; by Charles M. Sawyer, Chairman Board of Directors, Federal Reserve Bank, Kansas City, Mo., on "The Federal Reserve Bank

and the Farmer"; and by L. T. Hussey, State Fire Marshal, Topeka, on "Fire Prevention on the Farm."

Query box questions were answered.

Adjourned *sine die*.

FRIDAY EVENING.

Officers, members and delegates remaining in Topeka for the evening were entertained by the Topeka Chamber of Commerce at a 6 o'clock dinner. Toasts and speeches were delivered by J. Will Kelley, secretary of the Chamber of Commerce; L. M. Penwell, T. A. Hubbard, A. L. Sponsler, and Captain Joseph G. Waters, H. W. Avery, of Wakefield acting as toastmaster.

MEETING OF THE NEW BOARD.

TOPEKA, KAN., January 12, 1917.

The new Board was called to order in the office of the Secretary, at five p. m., by Vice President R. B. Ward. Those present were Vice President Ward, Secretary J. C. Mohler, H. S. Thompson, E. I. Burton, O. O. Wolf, H. W. Avery, T. A. Hubbard, E. L. Barrier, H. M. Laing, and E. E. Frizell.

The oath of office was administered to the newly elected officers and members present by Assistant Secretary Frank E. McFarland, notary.

Minutes of the meeting of January 14, 1916, were read by Secretary Mohler, and on motion approved as read.

E. L. Barrier nominated E. E. Frizell and O. O. Wolf as members of the Board of State Fair Managers for the ensuing two years, to succeed themselves. The nominations were seconded by J. C. Mohler and T. A. Hubbard, and there being no other nominations, on motion, the rules were suspended and the secretary instructed to cast the unanimous vote of the Board for Messrs. Frizell and Wolf; which was done, and they were declared duly elected.

On motion of Mr. Thompson, seconded by Mr. Frizell, the appointive officers for 1916 were reappointed for 1917, and the name of Prof. Robert K. Nabours, of Manhattan, Kan., was added, as zoölogist of the Board, for the ensuing year.

On motion of Mr. Barrier, seconded by Mr. Thompson, and unanimously carried, the vice president was instructed to appoint a legislative committee, to consist of three members, to draw up a new law giving representation in the annual meetings of the Board to county farmers' institutes, county farm bureaus, and the various state breed associations, and look after legislation during the 1917 session of the state legislature.

Vice President Ward appointed J. C. Mohler, chairman, H. M. Laing and H. W. Avery as such legislative committee.

Legislation needed for the Board of Agriculture was thoroughly discussed by those present.

On motion, duly seconded and carried, the meeting adjourned.

PROCEEDINGS

OF THE FORTY-SEVENTH ANNUAL MEETING OF THE
KANSAS STATE BOARD OF AGRICULTURE, HELD
IN TOPEKA, JANUARY 9, 10, AND 11, 1918.

WEDNESDAY, January 9, 1918.

The meeting was called to order in Memorial Hall by President J. T. Tredway, at four p. m.

On motion of H. S. Thompson, duly seconded and carried, the program arranged by the Secretary was declared the official program of the meeting.

The roll was called by the Secretary, and a quorum was found present, including the following-named officers and members: President J. T. Tredway, Vice President R. B. Ward, Treasurer A. W. Smith, Secretary J. C. Mohler, I. L. Diesem, H. S. Thompson, O. O. Wolf, H. W. Avery, E. I. Burton, T. A. Hubbard, E. L. Barrier, H. M. Laing, and E. E. Fizzell.

On motion of W. J. Brown, seconded and carried, the president was instructed to appoint committees on credentials, resolutions, and necrology.

President Tredway appointed the committees, as follows:

Committee on Credentials: H. W. Avery, chairman, Clay county; J. M. Gilman, Leavenworth county; Paul Klein, Allen county; H. B. Scott, Neosho county; E. L. Barrier, Greenwood county; B. V. Wheeler, Norton county; J. E. Voshell, McPherson county, and G. W. Halbower, Harper county.

Committee on Resolutions: A. W. Smith, chairman, Shawnee county; O. O. Wolf, Franklin county; E. I. Burton, Montgomery county; W. J. Sayre, Chase county; S. F. Paul, Marshall county; W. P. Harrington, Gove county; A. L. Sponsler, Reno county; E. A. Millard, Cowley county; and W. L. Brown, Kingman county.

Committee on Necrology: T. A. Hubbard, chairman, Sumner county; Geo. W. Ela, Jefferson county; J. A. Hargrave, Anderson county; F. M. Watkins, Montgomery county; C. B. Palmer, Marion county; J. N. Bell, Saline county; M. G. Blackman, Sheridan county; and I. L. Diesem, Finney county.

The minutes of the meeting of January 10-12, 1917, were read by the secretary, and on motion approved.

Secretary Mohler made the following report of the activities of the office of the Board during the year 1917:

"It has not been customary, but I think it a good plan, for the Secretary to make a formal report to the annual meeting each year of the work by the Board's office and the conditions surrounding it. Hereafter I shall endeavor to do that. On this occasion I shall take this oppor-

tunity of making a brief report orally. First, I wish to mention the generous treatment accorded to the Board by the legislature of 1917. I believe there has been no legislature in the history of Kansas more kindly disposed toward the Board than this one. It increased and extended representation in our annual meetings, according to the resolution adopted by the Board at its meeting in January, 1917. We now have in our annual meeting representatives not only of the county fair associations, but of farmers' institutes, county farm bureaus, and stock breeding associations and crop improvement associations of state-wide character, as well as the State Fair and other fair associations of district or wider scope. It was not the ambition through this new law to make our annual meeting big merely from the standpoint of numbers of authorized delegates, but rather to have the representation of the right character and properly distributed, and fairly representative of the agricultural and livestock interests of the state. So, if there is any county in Kansas that is not officially recognized in this annual meeting, it is the fault of the people of that county themselves. The law now leaves it wholly to the home folks to see that they have representation here, and this depends upon the enterprise and progressiveness of the citizens of the various counties.

"The work of the Board is steadily increasing, as is natural in a state like Kansas, where the farming industry is preëminent and where agriculture is constant in its growth and development. The 1917 legislature recognized this and made provision for meeting the enlarged demands by increasing our appropriation for the biennium, in fact almost trebling it. This result is very largely attributed to the agricultural committees of the House and Senate, the members of which had the agricultural interests of the state at heart and cordially coöperated in every possible way to increase the efficiency of the Board in promoting its work in behalf of the state's farming industry. Mr. William Campbell, of Bourbon county, and who was chairman of the House agricultural committee, I am happy to see with us to-day, as I am Mr. J. M. Gilman, of Leavenworth county, and also a member of the House agricultural committee, who is present. These gentlemen were ever ready to give a hearing to the representatives of the Board with respect to needed legislation, and we wish to hereby acknowledge the splendid services they rendered in support of measures calculated to improve the Board's work. It is also desired to express our sincere appreciation of the cordial disposition manifested by other members of the House and Senate agricultural committee, who let no opportunity pass to show their devotion to the agricultural interests of Kansas.

"The Board issued its usual reports concerning crop conditions during the year, also the biennial report, and has distributed something like 20,000 copies of it. The breeders' list is in the hands of the printer, and we expect it ready in a short time. We believe that it will be one of the most helpful publications to forward the livestock industry in the state of Kansas that we have ever gotten out. We have the preparation of a hog book in hand, and it will contain a vast fund of valuable information derived largely from the hog-raisers themselves. We have three men working on it constantly, and we know we are going to have a most valuable hog book when it is completed. It will be a companion to the alfalfa book which we have already prepared and distributed; and I wish to say, although I may be a little partial, that I believe our alfalfa book is the best treatise on that subject that has ever seen the light of day.

"In addition to performing the usual duties of the Board, we have been doing also a great deal of work for the State Council of Defense. The State Council was created and organized in accordance with the government's war program. In most if not all of the states whose legislatures were in session, councils of defense were created by law and adequate appropriations made to cover necessary expenses, but in Kansas our legislature had adjourned, and hence it devolved upon the Governor to appoint our Council of Defense. This the Governor did in April, 1917,

and in making these appointments I believe it was the endeavor of the Governor to select among its members the heads of various state departments and institutions so far as possible, and the secretary of this Board was chosen secretary of the State Council. The idea was to combine the machinery of all the Kansas state departments and institutions into the one Council of Defense, which was to be recognized as the particular institution for doing war work. As the State Council had no appropriation with which to carry out the war program, the Board of Agriculture, the Agricultural College, the Governor's office and other departments were called upon to defray the expenses, and the state auditor has been auditing vouchers for Council work drawn against our appropriation for the Board. So the Board of Agriculture has been using not only its office force, but its funds, to help keep Kansas at the front in war work. In doing this we were positive only of one thing, and that was that we were going to do everything possible to assist in winning the war, and we did not stop to inquire why we were called upon nor where the money was to come from; we simply proceeded to do it and paid the bills as they came in. This required, of course, a great deal of our time and energy as well as considerable of the money that the legislature appropriated to the Board, but all this effort and money was expended for a good cause, and I am sure will meet with the hearty approval of all patriotic and loyal citizens, even though our energies and funds were directed to a purpose not foreseen by the legislature when it so liberally provided for the Board's work.

"It is also a pleasure to report that one of the boys in our office, Earl Loomis, nineteen years old, volunteered for the service, and we have the honor of flying a service flag in the Board's headquarters, and we are proud of it. Earl is at Camp Doniphan, in the signal battalion corps, and I am sure that every member of this Board is gratified to know that its office force has a representative in the army of the United States—staking his life for the freedom of the world, than which no finer act could be performed.

"The Board has worked with the utmost harmony with all other state departments and state institutions, and this cordial relationship has not only promoted efficiency but has created a cordial feeling of good will throughout, the value of which cannot be overestimated."

On motion of A. W. Smith, seconded and carried, a vote of thanks was extended to the Secretary for the services performed in promoting the war work in addition to discharging the regular duties of the Board.

The Committee on Credentials made its report showing the following named parties as duly authorized delegates to the forty-seventh annual meeting of the Kansas State Board of Agriculture:

C. P. Alberts, Glen Elder.

Ivy Allen, Burlington.

Chas. A. Babbitt, Willis, Route 1.

R. B. Baird, Winfield, Route 4.

Frank L. Baker, Concordia.

H. B. Ball, Lane.

T. H. Barrett, Anthony.

C. L. Beardsley, Russell.

W. H. Becker, Sylvan Grove.

J. N. Bell, New Cambria.

C. H. Benson, Wakeeney.

J. W. Berry, Jewell City.

F. A. Billhimer, Jetmore.

M. G. Blackman, Hoxie.

D. L. Bluhm, Bazine.

E. E. Bowersox, Belleville,

Chas. A. Boyle, Emporia.

C. V. L. Branic, Council Grove.

Ira D. Brougher, Great Bend.

C. J. Brown, Blue Rapids.

T. C. Brown, Ottawa.

W. L. Brown, Kingman.

Jesse A. Bunch, Meade.

A. Burdorff, Tonganoxie.

E. I. Burton, Coffeyville.

Chas. A. Calkins, Syracuse.

S. E. Colglazier, Larned.

T. R. Conklin, Abilene.

L. D. Connell, Altoona.

J. G. Crist, Fort Scott.

Albert Cuthbertson, Girard, Route 1.

B. P. Davis, Oskaloosa.

Homer Davis, Walton, Route 1.	Henry McAfee, Topeka.
George Delfelder, Effingham.	Geo. V. McConahey, Concordia.
Alvin Dennison, Altamont.	J. W. McFadden, Stafford.
J. C. Duguid, Olathe.	Arthur J. Mahon, Clyde.
E. C. Dustin, Hanover.	F. H. Manning, Council Grove.
O. A. Edwards, Goodland.	E. A. Millard, Burden.
Geo. W. Ela, Valley Falls.	G. M. Miller, Cottonwood Falls.
J. G. Engle, Abilene.	J. Fred Miller, Larned, Route 5.
George Evans, Smith Center.	W. H. Mott, Herington.
Ross Faidley, Wakefield.	C. B. Palmer, Marion, Route 5.
A. D. Folker, Topeka.	S. F. Paul, Blue Rapids.
J. K. Freed, Scott City.	Geo. J. Pfister, Coffeyville.
H. D. Garst, McPherson.	H. L. Popenoe, Emporia.
J. M. Gilman, Leavenworth.	C. J. Priest, Satanta.
D. C. Greenwood, Hill City.	J. B. Reeves, Muscotah.
P. M. Hahn, Muncie.	Geo. B. Ross, Kansas City, Kan.
G. W. Halbower, Anthony.	T. C. Rudicel, Rush Center.
J. E. Hardesty, Pratt.	Dan Rundell, Alma.
J. A. Hargrave, Richmond.	P. S. Sanders, Oswego.
W. P. Harrington, Gove.	W. J. Sayre, Cedar Point.
Miner E. Harris, Burlingame.	H. B. Scott, Chanute.
George E. Hebrank, Council Grove.	E. E. Senser, Bison.
Fred Hohner, St. John.	Andrew Shearer, Frankfort.
H. N. Holdeman, Meade.	C. C. Shoffner, Kipp.
B. F. Houk, Moran.	W. E. Smith, Russell.
M. E. Householder, Clay Center.	A. L. Sponsler, Hutchinson.
L. D. Howard, Lawrence.	A. L. Stockwell, Larned.
F. H. Hull, Eureka.	Jonas Swarner, Coldwater.
F. W. Irwin, Oakley.	E. S. Travis, Smith Center.
J. E. Johnston, Minneapolis.	Guy M. Tredway, La Harpe.
Earl Jones, Burlington.	Abram Troup, Logan.
Paul Klein, Iola.	W. G. Tulloss, Rantoul.
J. P. Koelzer, Seneca.	William Vanbebber, Troy.
J. R. Ladie, Independence.	L. O. Vance, Phillipsburg.
Perry H. Lambert, Hiawatha.	J. E. Voshell, McPherson.
E. Laney, Wellington.	F. M. Watkins, Cherryvale.
Fred Laptad, Lawrence.	B. V. Wheeler, Norton.
D. M. Lavver, Paola, Route 7.	Carl Wheeler, Bridgeport.
Jas. W. Linn, Manhattan.	William Winkler, Seneca.
R. J. Linscott, Holton.	Earl Woerner, Clay Center.
J. G. Lofy, Belleville.	H. H. Wolcott, Larned.
A. G. Logan, Beloit.	C. J. Woods, Paola.
Roy E. Long, Neodesha, Route 1.	W. J. Young, McPherson.
Fred Look, Stockton.	John P. Zimmerman, Troy, Route 5.

On motion duly seconded and carried, the report of the Committee on Credentials was adopted.

The Ford County Agricultural Society, although not entitled to an official delegate, was represented at the meeting of F. J. Staath, of Dodge City.

On motion of A. W. Smith, duly seconded and carried, the members and delegates from the various Congressional Districts were instructed to hold District caucuses before Friday afternoon, to select and present to the meeting the names of two parties as their nominees for membership on the State Board of Agriculture.

Adjourned until 7:30 p. m.

WEDNESDAY EVENING SESSION.

President Tredway called the meeting to order in Memorial Hall at 7:30 p. m.

Prayer was offered by Rev. Arthur Henderson, of Topeka.

Governor Arthur Capper delivered an address of welcome on behalf of the state and Mayor J. E. House one for the city of Topeka, President Tredway responding for the State Board of Agriculture.

H. J. Allen, of Wichita, Kan., delivered an address on "At the Front."

Music was furnished during the evening by the Topeka High School Glee Club.

Adjourned until 9 a. m.

THURSDAY MORNING, JANUARY 10, 1918.

The meeting was called to order by President Tredway at 9 a. m. and prayer was offered by Rev. M. F. Troxell, Topeka.

On motion, seconded and carried, the roll call was dispensed with.

Papers were read by Arnold Berns, of Peabody, Kan., on "Cattle Feeding As a Business"; George C. Bowman, President Seymour Packing Company, Topeka, on "Poultry Production in 1917"; and Fred B. Caldwell, of Howard, Kan., on "What Kansas Can Do to Increase Pork Production."

On motion of R. B. Ward, seconded and carried, the President was instructed to appoint a committee, consisting of one person from each Congressional District, to prepare a statement or resolution embodying the ideas of the State Board of Agriculture, relative to increasing hog production, such statement to be submitted to the Kansas Council of Defense at its next meeting.

President Tredway appointed the following parties to compose such a committee: E. L. Barrier, chairman; George W. Ela, F. G. Laptad, Andrew Shearer, E. E. Frizell, George Evans, F. M. Watkins, W. J. Young, and Fred B. Caldwell.

Adjourned until 1:30 p. m.

THURSDAY AFTERNOON SESSION.

The meeting convened pursuant to adjournment, President Tredway in the chair.

Duncan Marshall, Minister of Agriculture, Alberta, Canada, addressed the meeting on "The Breeder and the War," and, on motion, seconded and carried unanimously, he was tendered a rising vote of thanks for his splendid message.

E. L. Morris, Grain Supervisor, U. S. Grain Corporation, Kansas City, Mo., spoke on the "Enforcement of the Grain Standards Act," followed by Professor L. E. Call, of Manhattan, who read a paper on "War Time Farming" prepared by W. M. Jardine, Dean of Agriculture and Director of the Experiment Station at Manhattan.

Adjourned until 7:30 p. m.

THURSDAY EVENING SESSION.

The meeting convened, with President Tredway presiding.

Mrs. Maude C. Thompson, editor Women's Column *The Courier*, Howard, Kan., read a paper on "The Side Line—A Mitigator"; and Doctor Edmund Janes Kulp, pastor of the First M. E. Church, Topeka, addressed the meeting on the subject, "Give Us Men."

Music was furnished during the evening by the Modoc Club, of Topeka. Adjourned until 9 a. m.

FRIDAY MORNING, JANUARY 11, 1918.

The meeting convened at 9 o'clock, President Tredway in the chair.

Prayer was offered by Rev. H. O. Holter, Topeka.

Roll was called by the Secretary, and a quorum found present.

Mrs. Theodore Saxon, of Topeka, read a paper on the help of women in time of war. Papers were also presented on "Competition or Coördination of Farmers' Organizations," by Edward C. Johnson, Dean, Division of Extension, Kansas State Agricultural College, Manhattan; and "The Federal Department of Agriculture's Plan for Handling the Farm Labor Problem," by E. V. Wilcox, Office of Farm Management, U. S. Department of Agriculture, Washington, D. C.

On motion of W. L. Brown, seconded and carried, the President of the Board of Agriculture was instructed to wire the Legislature of Mississippi congratulations on having ratified the National Prohibition Amendment.

Adjourned until 2 p. m., to meet at Knights and Ladies Hall.

FRIDAY AFTERNOON SESSION.

The meeting convened pursuant to adjournment, in Knights and Ladies of Security Hall, President Tredway in the chair.

Dr. J. Paul Goode, of the University of Chicago, Chicago, Ill., delivered an illustrated lecture on "The Sinews of War: Food and Coal."

The following resolution prepared by the Committee on Hog Production, was presented by Chairman Barrier, and on motion, duly seconded, was adopted:

WHEREAS, The State Council of Defense has asked hog producers of Kansas to increase the number of hogs at least 25 percent, and such effort is being made with little or no results, therefore be it

Resolved, That we ask the State Council of Defense to use its good offices with the National Food Administration in an effort to correct the conditions which are injuring the hog industry, namely: Eliminate sharp market fluctuations—

First, by basing the price of hogs on cost of production as tentatively recommended by the National Food Administration.

Second, secure transportation of feed stuffs to sections needing same.

Third, regulation of wheat by-products on the basis of \$2.00 wheat.

Fourth, urge retention in country of all well-bred breeding stock.

On motion, seconded and carried, W. L. Brown was appointed to present the resolution to the meeting of the Kansas Council of Defense.

The Board proceeded with the election of members of the State Board of Agriculture.

On motion of W. L. Brown, seconded and carried, a call of the various districts was made and the following nominations were placed before the meeting.

First district: C. H. Taylor, Valley Falls, for term expiring January, 1920. Perry H. Lambert, Hiawatha, for term expiring January, 1919.

Second district: O. O. Wolf, Ottawa, for term expiring January, 1921. Paul Klein, Iola, for term expiring January, 1919.

Third district: E. I. Burton, Coffeyville, for term expiring January, 1921. E. A. Millard, Burden, for term expiring January, 1919.

Fourth district: W. J. Tod, Maple Hill, for term expiring January, 1920. F. H. Manning, Council Grove, for term expiring January, 1919.

Fifth district: H. W. Avery, Wakefield, for term expiring January, 1921. R. B. Ward, Belleville, for term expiring January, 1919.

Sixth district: H. M. Laing, Russell, for term expiring January, 1921. O. A. Edwards, Goodland, for term expiring January, 1920.

Seventh district: H. S. Thompson, Sylvia, for term expiring January, 1921. E. E. Frizell, Larned, for term expiring January, 1920.

Eighth district: T. A. Hubbard, Wellington, for term expiring January, 1921. W. J. Young, McPherson, for term expiring January, 1920.

In every case on motion, duly seconded and carried, the rules were suspended and the nominees from the districts named were elected by acclamation.

At the call for nominations from the seventh district the following remarks were made by I. L. Diesem:

"I first became identified with this Board twenty-six years ago, having been elected a member thirteen times and president twice. This is as much honor as can be given any man, and now I can only be patriotic—true to Kansas as a state builder—by retiring and giving the younger men of our state a chance for similar service.

"But I cannot sever this official connection without expressing the great pleasure and benefit I have derived from my association with the men who have been coming here all these years. When I came I met such men as A. W. Smith, Thomas Hubbard, Thomas Potter, Colonel True, Ed. R. Smith, J. C. Morse, Wm. B. Sutton, and J. L. Finley. There were many other men, too, who were prominent in the earlier days, but who have answered the last roll call, as Joshua Wheeler, Governor Glick, E. Harrington, Judge Wellhouse, Capt. John Churchill, former secretary Martin Mohler, and Col. J. W. Robison. They have all helped to make Kansas history.

"The first time I came here I was asked by the secretary of this Board to give a paper on alfalfa, and it was the first article to appear in a State Board report on that subject. The things advocated in it are as good to-day as then, but I well remember how Mr. Potter took exceptions to that paper. He skinned me alive, saying, 'Now, don't you eastern farmers follow these western fellows off on a wild goose chase, and pay out a high price for this seed and lose your money. These fellows in the west had a big boom a few years ago, and it "busted" in 1887.' I would like to have Mr. Potter here to-day, and make him take those words back.

"In 1901 I presented a resolution to this Board, asking the state legislature to appropriate money to foster the growing of sugar beets. The Board adopted the resolution and the legislature passed a bill allowing \$10,000 a year for two years, and later increased the appropriation to \$20,000. This resolution brought results, for it was the means of establishing the fact that sugar beets could be grown in Kansas successfully. It had the effect of bringing Colorado capitalists to our state, who bought

land and built the only sugar factory in Kansas to-day. This, the Garden City Sugar and Land Company, has invested in lands and factory about \$6,000,000, and made this year 82,000 one-hundred-pound sacks of the finest granulated sugar, equaling five pounds of sugar for every man, woman and child now living in Kansas.

"Later I introduced a resolution, which was passed by this Board, asking the federal government to make surveys and investigate the underflow of western Kansas, with a view to pumping the water for irrigation. The resolution was forwarded to the United States Congress and resulted in the government making the investigation and installing a great irrigation project. I am sorry to say that the project was a failure, but the blame was due only to the government engineers. The theory was right, as is evidenced by the private pumping plants out there now, and the fact that the Sugar Company is now using part of the old government project.

"A good many years ago Governor Glick, and some others, including myself, were on a committee that appeared before the state legislature in a strong plea for a state fair. In later years this has come.

"I am reciting this history especially for the benefit of the younger fellows, to suggest to them the many ways they, too, can help in building up this great state that we love. I have asked help and the Board of Agriculture has given freely. All western Kansas is grateful for the support you have given us. The recollection of these things and the men I have met are some of the pleasantest memories of my life.

"Again I thank you for all the courtesies extended to me."

W. L. Brown, on behalf of the committee on resolutions, presented the following resolutions for consideration and moved their adoption:

"The Forty-seventh Annual Meeting of the Kansas State Board of Agriculture has assembled under the shadow of a world's crisis. For more than three years the volcano of war has been deluging Europe with its bloody lava, carrying death and unparalleled ruin in its train, until the civilized world is appalled at the awful sacrifice of human life and destruction of property and of resources. In the interests of humanity our nation sought to carry the dove of peace to our warring brethren across the sea. Mediation was suggested and refused, diplomacy failed, and friendship of long standing was of no avail. International law was violated and treaties were treated as scraps of paper. Our flag was fired upon, our vessels sunk, American lives were lost, redress was refused, until we were reluctantly forced to sever our diplomatic relations with Germany, and to-day we are at war with the most barbarous and arrogant military autocracy that the world has ever known. Our young manhood has been called from the peaceful pursuits of life to the colors, in defense of liberty, justice and humanity. Many thousands of our active producers have been called from the vocations of production to that of consumers. Recognizing the fact that agriculture is the most important industry in the nation and upon its success depends the winning of the great principles involved in this world's war, it must be apparent to everyone that never in all history has such a momentous responsibility rested upon the agriculturists of this nation: therefore, be it

"*Resolved*, That we, the representatives of the farmers of Kansas, pledge ourselves to consecrate our efforts and our energies to the conservation of our resources and a more intense effort to increase our agricultural production. We dedicate ourselves to an unequivocal and patriotic devotion to our country, to our flag and to our soldiers, whether in cantonments in our own land or upon the battlefields of France; realizing that no sacrifice is too great. We pledge ourselves to devote every energy in our power to the winning of this great war with an honorable and lasting peace.

"Be it further resolved, That the farmer who devotes his time and best efforts to increasing the production of the staples of life at this time is rendering his country an indispensable service.

"That we heartily indorse the action of our Congress in submitting to the legislatures of the several states of the Union an opportunity to ratify national prohibition, allowing all states to follow Kansas in a fight, the winning of which means as much or more to the generations yet to come than some issues of this war.

"That we affirm our belief in the equality of the sex and like our forefathers condemn taxation without representation, which has been practiced heretofore in the treatment of the women of the land, and earnestly urge upon the lawmakers of the nation the submission of the Susan B. Anthony amendment to the constitution granting suffrage to women, and pledge for our state the ratification of said amendment at the first opportunity.

"That we note with amazement, at a time when this great nation of ours is engaged in a world-wide war and needs the assistance and coöperation of every American, certain citizens are profiteering and speculating in the necessities of life, with a view of making immense profits out of the nation's needs. Representing as we do the farmers of the great wheat producing state of Kansas, we wish to protest against the action of the mills in keeping up the prices of flour and the by-products of our wheat at the same time that the farmer has patriotically accepted a reduction in the price of his product. We are not here to condemn the fixing of a price upon wheat, or to say that it is unreasonable or unjust, but we point to the fact that up to the present time the reduction in the price of the farmer's wheat has brought no reduction in the price of flour or the by-products of the mill, or the loaf of bread. Instead of the consumer benefitting by the reduction, the benefit has been appropriated by the mills and the bakers. Relief along this line under the law fixing prices has not been obtained, and we believe cannot be unless the law is amended. Therefore, we respectfully ask and demand that the Federal Trades Commission at once proceed to investigate this matter in order to give the public a square deal, not alone for our sake as consumers and producers, but for the good name of the nation.

"That we are in sympathy with the food administration and recognize the fact that Mr. Hoover has one of the largest undertakings any man in the nation has ever had to grapple. We are willing and anxious to do our part in conservation, and if needs be to deny ourselves in every manner possible that our soldiers and the allies may be well fed.

"That the production of livestock is an important part of agriculture. Especially is this true in Kansas, where the sum invested amounts to millions. Under orders from those in control of the Federal Land Banks, a discrimination has been made against pasture lands, which are absolutely necessary in the production of livestock. Money cannot be borrowed from the Federal Land Banks on them as security. We feel that this restriction should be removed and that the land used for stock raising should have the same recognition as land in cultivation.

"That we believe a mistake has been made in appointing as heads of the departments for food regulation men who have large financial interests in the industry regulated. We feel that all such men should be removed from the heads of those departments and their places filled by business men who have no financial interests in the industry regulated.

"That we recommend that an amendment to the constitution be submitted by the next session of the legislature to a vote of the people, allowing the state to engage in internal improvements.

"That we heartily indorse the action of the government in the thorough investigation and overhauling now being given of packing houses, stock yards, and other things connected with the marketing and feeding of livestock. We have been fully aware of these conditions for years, and this

investigation develops that our intention was correct and our demands just.

"That with pride we point to the meeting just closed as the most successful in the history of the State Board of Agriculture, not in program alone, but in attendance as well. In recognition of the great success of our meeting we wish to thank the Kansas legislature of 1917 for a law making provision for increasing our membership and representation, securing more efficiency thereby. We also wish to thank the press, the people of Topeka, the speakers, glee clubs and others who have contributed to our entertainment in this memorable year.

"That to our worthy president, J. T. Tredway, we offer our thanks and appreciation for his untiring work, fairness, and usefulness. He carries with him the best wishes of all the people of our commonwealth.

"That we heartily indorse the hard and effective work of our secretary, J. C. Mohler, and his faithful, efficient employees, in the vast good accomplished for agriculture in the year just passed. Their work has not only benefited the people of Kansas, but has been a model for other states.

"That we recognize that in the upbuilding of this Board to the position it now occupies there have been sacrifices of time and energy made by men who now after the many years devoted to the work retire from its activities. Among these we especially mention A. W. Smith, T. M. Potter, Chas. E. Sutton, I. L. Diesem, and E. L. Barrier. We wish to assure them that all their efforts have been appreciated and that in the years to come the builders will not be forgotten by those interested in the affairs of this Board, or by the friends of agriculture."

The motion to adopt was duly seconded, no remarks being made, and was carried unanimously.

E. E. Frizell presented the following resolution and moved its adoption:

"WHEREAS, It is reported that a department will be created by the government for handling agriculture, stock raising, etc., and that its membership will be made up of men actually interested in these productions: therefore be it

"Resolved, by this State Board of Agriculture, in case such a department be created, that we recommend for the consideration of the appointive power, Major W. L. Brown, of Kingman, a man who has been prominently identified with the building up of our state along agricultural lines."

The motion was seconded and the resolution adopted unanimously.

The following report was presented by the Committee on Necrology:

"It becomes our painful duty to chronicle the fact that on the 7th day of February, 1917, the Messenger of Death invaded our Board and called from labor to rest our Assistant Secretary, Frank Edimer McFarland. On that morning he came to the office apparently in his usual health and commenced the duties in his cheerful and happy frame of mind. Two hours later he complained of feeling a little indisposed and went to his doctor's office for relief, where the Angel of Death met him and took his spirit out across that unknown sea that has never shadowed a returning sail.

"In the death of Brother McFarland this Board lost a competent and faithful officer, the state a splendid Christian citizen, and his family a kind husband, and an indulgent father. To his family and friends we extend our heartfelt sympathy in this their great and irreparable loss."

Chairman T. A. Hubbard moved the adoption of the report, the motion being seconded, and carried unanimously; the following remarks being made by members present:

MR. MOHLER: "Mr. McFarland was one of the kindest, gentlest, and most thoughtful men I ever knew. I never had it brought home to me so forcefully as in the death of Mr. McFarland that we do not properly appreciate our acquaintances and friends while they are with us. We sadly miss Mr. McFarland both as a valued co-worker and genial associate. He was a great asset to the office. He had a remarkable faculty for making friends. His genuine hospitality caused visitors to quickly feel that they were welcome. There was always a big arm chair back of his desk. He would invite legislators when they tired of the proceedings upstairs to come down and spend a quiet hour with him. He had more warm friends among the lawmakers than anyone connected with the Board, not excepting Mr. Coburn himself. The legislature paid an unusual tribute to a state employee when it adjourned out of respect for Mr. McFarland, and appointed committees from both houses to attend the funeral services. I think there was never a case before in the history of Kansas in which the legislature adjourned in honor of a state employee. It has been an ancient custom in the demise of state officials or head of departments, but rarely, if ever, otherwise. This action of the legislature was in recognition of the man and his many splendid qualities. It suggests how he was esteemed by the members of the legislature; men with whom he came in contact.

"I held Mr. McFarland in highest regard and admired him greatly. He was a competent man, clean and lovable. His passing is mourned by a host of friends throughout Kansas."

MR. F. D. COBURN: "Mr. President and gentlemen: Mr. McFarland was one of my discoveries as Secretary—one of my boys. I liked him from the first and that liking grew to the end, or so long as I was connected with him and the department. What Secretary Mohler has said I can vouch for most heartily. I have known many kindly, conscientious and capable men, but none whom I esteemed more than Frank McFarland, and I grieve with you at his going from us. He was my friend, and I love my friends best."

MR. TREDWAY: "I want to say in connection with the passing away of our beloved friend, I became well acquainted with him in the years I have been in attendance at the board meetings, and while the others are all kind hearted, big hearted fellows, none ever treated me more nobly than did Brother McFarland. There was nothing too good for him to do, nothing asked but what he was ready to do for myself or any of the members of the Board with his characteristic dispatch. He was wonderfully endowed with that spirit of good will to all men, and I shall long remember and cherish the memory of Brother McFarland."

MR. T. A. HUBBARD: "The cruel hand of death has again been laid upon our Agricultural Board and family, and suddenly snatched from us our loved friend and co-worker, Frank Edimer McFarland, the Assistant Secretary. Frank McFarland was a bright, brainy, lovable Christian gentleman, with an abundance of sunshine in his soul. We had all

learned to love him. His work has passed the critical inspection of the master overseers and was pronounced good and true. But his sun went down in the meridian of life and his chair is vacant. Let us cherish his sweet memory and imitate his virtues. An all wise God who doeth all things well has called him from labor to refreshment. His spirit has gone to the God who gave it and we will keep his grave and memory green with sweet recollections of our association together. May an all wise God deal gently with his loved ones."

A resolution favoring exemption from military draft of members of religious sects whose creed prohibits participation in war service, presented by C. B. Schmidt, was tabled, on motion duly seconded and carried unanimously.

Adjourned *sine die*.

FRIDAY EVENING.

Officers, members and delegates remaining in Topeka for the evening were entertained at six o'clock dinner at the Topeka Chamber of Commerce rooms. Toasts and speeches were delivered by Chas. L. Mitchell, Wm. A. Biby, Dr. O. O. Wolf, T. A. McNeal, Mrs. Theodore Saxon and S. M. Brewster; J. T. Tredway acting as toastmaster.

MEETING OF THE NEW BOARD.

TOPEKA, KAN., January 11, 1918.

The new Board met in the office of the secretary at five p.m., those present being Perry H. Lambert, O. O. Wolf, Paul Klein, E. I. Burton, E. A. Millard, F. H. Manning, H. W. Avery, R. B. Ward, H. M. Laing, O. A. Edwards, H. S. Thompson, E. E. Frizell, T. A. Hubbard, and W. J. Young.

On motion, duly seconded and carried, T. A. Hubbard was elected as temporary chairman and assumed the duties of presiding officer.

In like manner J. C. Mohler was elected temporary secretary of the meeting.

The oath of office was administered to the members present by Assistant Secretary I. E. Davis, notary.

On motion of Mr. Avery, seconded by Mr. Hubbard, it was decided that in future it be the rule of this Board that the president shall be elected for one year and shall not be eligible to succeed himself.

Minutes of the meeting of January 12, 1917, were read by Secretary Mohler, and on motion, approved.

E. A. Millard placed J. C. Mohler in nomination for the position of secretary of the Board, for two years, to succeed himself. The nomination was seconded by O. O. Wolf and H. S. Thompson. There being no other nominations, it was moved and seconded that the president be instructed to cast the unanimous vote of the meeting for Mr. Mohler, which was done, and he was declared duly elected.

Mr. Mohler expressed his appreciation in a short talk and told of the work that was being carried on and what was being planned for the future.

A discussion of the advisability of the Board meeting quarterly, resulted in Mr. Avery presenting a motion that the Board meet four times during the present year; the first meeting to occur within the first three months following the annual meeting, the second within the next three months, the third at the State Fair, and the fourth meeting to occur in conjunction with the annual meeting, just preceding the program. The motion was seconded by E. E. Frizell and unanimously carried.

On motion of Mr. Klein, seconded by Mr. Young, and carried, it was decided to have an informal ballot for nominations for the position of president of the Board for the ensuing year, that the two receiving the greatest number of votes to be the nominees in such an election.

The informal ballot was taken and resulted as follows: O. O. Wolf, 9; R. B. Ward, 2; H. M. Laing, 1; H. S. Thompson, 1; and H. W. Avery, 1.

On motion of Mr. Ward, seconded by Mr. Laing and carried, the informal ballot was made formal, and O. O. Wolf was declared elected president for the ensuing year.

E. E. Frizell nominated H. S. Thompson for the position of vice president for the ensuing year, the nomination being seconded by E. A. Milard. On motion of Mr. Avery, seconded by Mr. Young, and carried, the rules were suspended and the secretary instructed to cast the vote of the Board for Mr. Thompson, which was done, and Mr. Thompson was declared elected vice president.

H. W. Avery, nominated by H. M. Laing, and seconded by H. S. Thompson, was in like manner elected treasurer of the Board for the ensuing year.

A. W. Smith, treasurer of the Board in 1917, officially turned over to the new treasurer, Mr. Avery, the money in his charge, amounting to \$2.15, and made a report of his stewardship, showing no receipts and no expenditures from the treasurer's fund during his term of office.

On motion of Mr. Ward, seconded by Mr. Wolf, and unanimously carried, H. S. Thompson and T. A. Hubbard were elected by acclamation as members of the Board of State Fair Managers, to succeed themselves, each for terms of two years.

The officers of the Board by appointment for the year 1917 were re-appointed for the year 1918, with the following exceptions: Dr. R. R. Dykstra, Manhattan, as veterinarian in place of Dr. F. S. Schoenleber; Prof. Raymond C. Moore, Lawrence, as geologist in place of Prof. Erasmus Haworth; and Snowden D. Flora, Topeka, as meteorologist in place of T. B. Jennings.

An explanation of the government plan for coöperation between the state and government departments in the making of crop reports was made by Secretary Mohler. No action was taken, but it seemed to be the opinion of the Board that the agreement suggested by the government's department was not desirable at this time.

A discussion of the various departments of the State Fair was entered into, and it was urged that the fair should have the hearty support of all members of the Board and that all members should be used by the fair management as much as possible along lines where they would be the most useful. It was urged that exhibits at county fairs held early should

be sent to the State Fair, in order that the county exhibits especially could there enter into competition and the best exhibits in the state be decided upon.

The oath of office was administered to the newly elected officers.

On motion of Mr. Thompson, duly seconded and carried, the meeting adjourned.

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TWENTY YEARS OF KANSAS AGRICULTURE.

The following tables compiled from the official annual records of the State Board of Agriculture, show the various agricultural products and their *home* values in Kansas in each of the twenty years from 1899 to 1918, inclusive, the aggregate yields of four principal crops, and the aggregate values of all agricultural products except live stock on hand (kept over):

PRODUCTS.		1899.		1900.		1901.		1902.		1903.		1904.		1905.		1906.		1907.		1908.	
		Quantities.	Values.	Quantities.	Values.	Quantities.	Values.	Quantities.	Values.	Quantities.	Values.	Quantities.	Values.	Quantities.	Values.	Quantities.	Values.	Quantities.	Values.	Quantities.	Values.
Winter wheat	bu.	42,815,471	\$22,016,070	76,595,443	\$41,624,097	90,045,514	\$50,479,580	54,323,839	\$28,983,944	93,313,912	\$52,062,062	64,793,399	\$51,149,917	75,842,659	\$52,067,649	91,157,414	\$54,087,834	73,233,907	\$56,187,583	70,408,560	\$63,597,490
Spring wheat	bu.	871,542	389,441	745,648	350,048	287,581	130,926	325,397	155,547	727,990	364,294	348,230	259,330	1,335,518	801,717	2,135,566	1,000,878	609,929	287,656	400,362	267,656
Corn	bu.	225,183,432	53,590,576	134,523,677	39,581,835	42,605,672	21,731,215	201,367,102	78,321,653	169,359,769	57,078,142	132,021,774	50,713,956	100,519,593	68,718,584	187,021,214	65,115,203	145,288,326	63,040,743	150,640,516	82,042,462
Oats	bu.	26,046,723	4,951,636	31,169,892	6,620,444	20,806,329	7,375,818	32,966,114	9,564,254	28,025,729	9,864,764	21,819,257	6,872,800	29,962,987	8,384,710	26,560,919	7,760,396	14,104,194	5,511,113	16,707,979	7,118,847
Rye	bu.	1,754,406	690,408	1,945,026	753,158	2,955,065	1,408,980	3,728,296	1,584,321	2,962,392	1,255,258	1,110,378	635,585	1,114,390	578,981	711,118	344,650	353,417	219,409	361,476	249,058
Barley	bu.	3,352,845	781,202	3,319,333	972,358	2,356,700	931,784	2,188,973	801,382	4,854,337	1,559,907	5,344,432	1,674,714	9,712,954	2,800,850	7,231,947	2,280,518	2,979,300	1,375,674	2,657,472	1,314,343
Emmer ("speltz")	bu.																				
Buckwheat	bu.	8,268	5,374	4,400	3,300	3,177	2,700	2,710	2,216	1,974	1,579	3,387	2,710	12,730	11,457	6,161	5,655	8,032	7,658	3,945	5,587
Irish potatoes	bu.	7,664,405	2,612,730	7,141,806	2,689,298	2,313,772	2,313,772	8,193,632	3,136,857	5,023,042	3,755,305	6,079,391	3,034,120	6,865,326	3,587,688	5,685,164	3,584,497	5,336,979	4,138,403	5,937,925	4,431,864
Sweet potatoes	bu.	364,080	150,265	432,156	187,156	231,950	289,937	539,879	334,487	362,795	344,655	417,386	292,031	507,776	300,664	503,376	353,722	475,654	390,415	481,760	413,686
Castor beans	bu.	37,862	34,076	25,968	6,103	7,934	4,400	5,500	1,758	2,925	2,925	2,925	2,925	2,160	2,700	405	405	108	108	585	585
Cotton	lbs.	27,650	1,383	48,400	2,420	57,800	4,046	136,005	9,520	75,040	6,754	59,625	4,770	45,060	15,830	1,903	50,850	5,085	09,500	6,950	6,950
Flax	bu.	1,412,941	1,271,647	1,693,238	2,201,209	1,260,192	1,701,259	1,427,975	1,713,570	606,214	484,971	372,324	336,951	557,169	440,639	381,299	337,176	304,387	383,941	360,011	360,011
Hemp	lbs.	34,000	1,700	9,200	460	3,600	1,600	10,200	610	13,650	1,365	14,400	1,440	12,405	1,241	6,295	6,295	6,100	4,800	480	480
Tobacco	lbs.	12,250	1,225	9,200	1,800	1,760	1,515	16,584,205	495,640	8,682,335	322,841	12,133,535	371,050	9,585,030	300,423	10,715,665	331,433	12,158,200	404,133	11,595,740	372,579
Broom corn	lbs.	14,000,705	455,023	18,674,785	655,345	13,105,125	524,205	16,584,205	495,640	8,682,335	322,841	12,133,535	371,050	9,585,030	300,423	10,715,665	331,433	12,158,200	404,133	11,595,740	372,579
Millet	tons	796,320	2,354,248	796,985	2,585,267	448,784	2,472,863	400,160	1,445,415	549,163	1,855,059	444,625	1,600,444	498,816	1,765,434	446,524	1,788,314	446,800	2,288,133	416,413	1,841,231
Sugar beets	tons		2,949,846		3,384,925		3,785,954		3,822,668		4,157,558		3,749,158		2,971,331		3,444,768		3,143,234		3,278,440
Sorghum	tons	25,159	66,063	13,263	41,859	10,734	45,063	16,514	56,166	18,170	60,851	22,807	73,476	58,171	190,974	44,875	146,289	60,131	234,686	106,268	515,269
Kafir	tons	2,203,429	5,289,598	1,966,217	5,756,285	1,380,492	6,388,125	2,824,634	9,495,572	2,078,279	6,142,170	1,579,879	5,041,546	1,745,531	5,352,810	1,675,164	5,059,238	1,495,291	1,794,032	6,856,846	19,359,769
Jerusalem corn	tons	10,497	25,179	5,460	16,245	4,811	18,663	7,989	27,272	5,956	17,912	6,132	18,584	9,027	31,458	6,521	35,458	6,521	35,458	6,521	35,458
Tame hay	tons	1,047,497	4,451,862	1,227,343	5,829,308	1,172,823	803,934	1,262,340	6,700,370	1,598,628	8,792,940	1,805,766	9,064,880	1,757,367	6,493,242	1,474,382	6,844,331	1,294,828	7,747,323	1,145,643	5,495,083
Prairie hay	tons	1,609,985	6,410,861	1,689,455	6,889,455	1,383,388	9,680,699	820,637	3,282,548	1,811,706	7,246,824	1,325,637	4,910,464	1,757,367	69,828,807	81,571,924	81,571,924	97,324,194	87,078,468	87,078,468	145,288,326
Live-stock products																					
Horticultural products, etc.			1,580,435		1,583,027		1,872,056		2,242,332		2,356,994		1,591,743		3,025,323		2,182,938		4,089,551		995,829
Totals			\$169,848,287		\$187,796,406		\$195,254,653		\$216,002,025		\$223,984,498		\$208,406,365		\$238,836,426		\$246,905,051		\$266,397,756		\$277,733,953

PRODUCTS.		1909.		1910.		1911.		1912.		1913.		1914.		1915.		1916.		1917.		1918.	
		Quantities.	Values.	Quantities.	Values.	Quantities.	Values.	Quantities.	Values.	Quantities.	Values.	Quantities.	Values.	Quantities.	Values.	Quantities.	Values.	Quantities.	Values.	Quantities.	Values.
Winter wheat	bu.	80,226,704	\$75,338,255	60,282,581	\$52,243,919	50,704,673	\$43,757,250	88,384,920	\$70,842,813	72,139,699	\$56,153,511	180,375,042	\$151,143,795	95,141,207	\$85,177,663	98,977,265	\$134,065,810	41,479,464	\$85,515,873	93,008,941	\$185,976,945
Spring wheat	bu.	732,036	602,935	754,758	542,046	823,340	583,400	504,798	338,624	318,352	221,309	549,843	439,293	504,174	407,495	549,497	483,923	405,328	156,391	356,000	
Corn	bu.	147,005,130	83,066,905	152,810,884	76,402,328	105,047,068	59,599,408	156,499,382	83,483,681	18,420,052	13,378,475	87,338,272	59,320,147	142,653,140	73,547,444	62,127,191	51,886,272	106,166,517	120,540,411	44,539,488	64,081,656
Oats	bu.	25,588,220	10,254,230	53,903,474	18,441,608	32,052,145	12,450,341	42,298,386	16,074,548	28,125,677	11,842,576	45,348,857	17,780,298	34,304,685	13,037,800	29,177,688	14,199,056	60,011,849	36,612,776	50,482,487	35,502,383
Rye	bu.	555,807	256,941	246,809	174,392	250,265	207,961	545,658	389,245	568,383	414,306	2,193,279	1,562,878	1,892,620	1,416,768	737,217	769,895	1,293,371	2,144,708	2,257,212	3,509,001
Barley	bu.	3,786,455	1,724,530	4,627,225	2,034,022	1,437,169	2,223,525	2,833,537	1,202,242	1,759,092	888,650	4,355,565	2,024,352	10,405,647	4,399,476	6,049,477	4,306,175	4,010,860	4,013,193	5,737,224	5,601,766
Emmer ("speltz")	bu.	1,448,601	581,185	1,119,009	504,458	78,985	37,355	146,282	71,444	7,092	3,514	61,351	27,815	84,933	34,465	32,255	5,234	3,460		10,685	8,107
Buckwheat	bu.	4,187	4,148	3,593	1,299	1,209	4,377	4,377	4,377	4,377	4,377	4,377	4,377	4,377	4,377	4,377	4,377	4,377	4,377	4,377	4,377
Irish potatoes	bu.	7,026,896	5,008,739	4,895,425	4,131,775	1,969,629	1,899,068	4,727,823	3,438,261	2,946,308	2,444,680	3,708,342	2,744,294	5,138,850	3,407,157	4,301,063	3,930,393	3,303,341	4,788,601	2,652,004	3,748,761
Sweet potatoes	bu.	553,228	461,219	494,570	435,128	294,400	300,995	447,702	364,606	307,985	293,352	315,204	238,163	391,310	322,141	352,756	332,250	288,800	411,729	233,697	370,947
Castor beans	bu.	90	458	572	1,06	1,06	1,258	760	818	765	842	977	1,075	984	855	361	542				
Cowpeas	tons																				
Cotton	lbs.	8,750	815	600	800	8,000	9,260	9,260	9,260	9,260	9,260	9,260	9,260	9,260	9,260	9,260	9,260	9,260	9,260	9,260	9,260
Flax	bu.	354,647	383,550	462,725	925,450	364,998	650,544	460,122	240,485	263,781	366,841	414,536	155,222	201,780	133,182	233,069	357,043	964,016	205,227	666,988	666,988
Tobacco	lbs.	4,245	424	236,950	25,261	13,720	113,300	40,100	80,400	10,254	59,500	10,254	59,500	10,254	59,500	10,254	59,500	10,254	59,500	10,254	59,500
Broom corn	lbs.	17,094,535	1,814,868	39,561,123	1,604,693	14,994,375	897,398	28,230,584	894,737	6,020,550	299,108	12,249,150	401,511	9,330,734	437,251	9,591,530	18,571,095	2,495,099	18,582,438	1,791,975	2,936,300
Millet	tons	424,943	1,966,814	407,557	2,240,909	242,050	1,668,445	309,539	1,864,275	90,856	601,935	222,702	1,207,659	261,586	1,035,740	143,029	721,010	128,419	1,275,071	1,250,571	1,250,571
Sugar beets	tons	102,462	512,310	70,890	354,450	27,260	136,280	88,842	484,285	55,011	300,026	72,284	393,364	51,359	282,474	58,632	321,390	108,699	694,754	74,215	741,628
Sorghum	tons		3,766,195		4,679,010		5,426,942		7,682,406		3,790,355		4,212,433		5,476,929		4,358,713		10,056,015		14,023,265
Milo	tons	202,328	559,259	202,073	1,833,230	254,639	1,808,855	440,573	2,300,402	162,534	1,188,643	414,955	1,884,344	bu. 4,033,411	1,757,167	bu. 3,327,329	1,163,906	4,785,391	bu. 3,327,329	4,121,699	6,166,632
Feterita	tons	1,776,155	7,150,081	1,799,544	8,011,283	2,561,455	14,455,037	4,377,828	19,635,558	1,945,237	12,324,131	3,438,632	15,710,644	" 21,633,110	10,012,696	" 5,095,052	4,988,078	" 11,818,215	16,809,378	" 9,808,078	15,202,510
Grain sorghum, for hay and forage,	tons																				
Jerusalem corn	tons	8,775	36,169	17,843	83,975	11,784	9,965	46,082	3,214	23,737	9,405	41,843	3,886,474	8,141,742	2,214,088	7,426,830	3,637,404	19,191,352	3,483,287	20,414,403	
Sudan grass	tons																				
Tame hay	tons	2,052,927	14,343,933	1,973,908	17,450,735	1,784,032	1,267,961	11,916,011	1,692,655	18,520,763	1,328,977	14,297,483	5,070,776	32,019,260	4,018,800	34,607,185	3,555,722	64,467,014	3,084,066	66,044,075	
Prairie hay	tons	1,497,793	7,456,781	1,559,064	11,080,932	1,144,007	861,283	6,583,027	1,061,297	9,400,547	492,137	4,379,365	1,659,306	8,440,080	1,211,355	7,550,855	1,031,986	14,782,475	67,000	12,070,049	
Livestock products			88,894,467		101,276,925		95,757,113		139,710		105,538,580		94,057,022		89,058,708		95,058,708		112,849,511		145,865,041
Horticultural products, etc.			3,856,672		1,228,260				1,397,180		3,460,883		1,453,765		1,895,180		2,290,550		2,571,831		4,061,009
Totals			\$307,538,165		\$304,914,342		\$324,988,943		\$324,988,943		\$241,470,426		\$376,297,713		\$342,843,467		\$371,188,476		\$507,482,787		\$1,017,250

General Statistics
1917-1918

***Population, Acreage, Production, Assessed
Valuation, Etc.***

(369)

ALLEN COUNTY.

Organized in 1855; area, 321,961 acres; population, 26,248; rank in population, 14; assessed valuation, \$34,874,796; miles of railroad, main track, 96.90; county seat, Iola; population, 9,291.

POPULATION AND VALUATION.—ALLEN COUNTY.

Table showing total population, by townships and cities, for 1917 and 1918, and the assessed valuation of the municipal townships and cities of 1918.

Townships (and cities).	Population.		Assessed valuation of property, 1918.				
	1917.	1918.	Land.	City lots.	Personal.	Railroad, etc.	Total.
The county.....	25,964	26,248	\$12,187,495	\$5,453,350	\$9,287,275	\$7,946,676	\$34,874,796
Carlyle.....	95	100					
Carlyle tp.....	648	742	\$774,520	\$14,760	\$251,435	\$992,096	\$2,032,811
Cottage Grove tp..	751	757	753,515		433,885	583,183	1,770,583
Deer Creek tp....	503	501	794,603		278,110	22,617	1,095,330
Gas.....	757	744		111,130	40,580	35,956	187,666
La Harpe.....	1,392	1,294		289,280	257,655	66,792	613,727
Elm tp.....	1,254	1,261	1,217,964	39,225	660,690	679,778	2,597,657
Elsmore.....	226	234		62,740	68,585	29,291	160,616
Savonburg.....	216	240	1,532	98,110	111,140	27,080	236,330
Elsmore tp.....	1,070	1,058	1,422,496		502,330	327,513	2,252,339
Geneva.....	103	94					
Geneva tp.....	523	547	668,398	17,570	312,980	262,298	1,261,246
Humboldt.....	2,334	2,490		884,290	551,410	95,406	1,531,106
Humboldt tp.....	488	571	870,889	68,630	1,201,595	1,094,783	3,235,897
Bassett.....	385	355		555,300	128,940	4,235	688,475
Iola.....	9,326	9,291		2,938,880	1,773,345	266,197	4,978,422
Iola tp.....	1,613	1,675	1,462,044	107,540	747,365	1,501,222	3,818,171
Petrolia.....	147	136					
Logan tp.....	483	471	680,090	21,440	257,330	745,002	1,703,862
Moran.....	693	776		183,535	208,015	70,798	462,348
Marmaton tp.....	950	942	1,361,063		694,400	662,854	2,718,317
Mildred.....	341	379		53,790	50,440	33,823	138,053
Osage tp.....	912	953	1,155,070	2,620	343,765	296,268	1,797,723
Salem tp.....	754	737	1,026,843	4,510	413,280	149,484	1,594,117

LIVESTOCK.—ALLEN COUNTY.

Table showing number, value and mortality of livestock in the county for 1917 and 1918.

Livestock.	1917.		1918.		Mortality.	
	Number.	Value.	Number.	Value.	1917.	1918.
Horses.....	10,039	\$1,204,680.00	9,552	\$1,060,272.00	293	198
Mules and asses.....	2,617	353,295.00	2,176	304,640.00	39	25
Milk cows.....	7,780	583,500.00	8,609	705,938.00	163	169
Other cattle.....	13,358	667,900.00	15,449	834,246.00	308	564
Sheep.....	2,496	27,456.00	3,524	44,050.00	93	94
Swine.....	13,210	270,805.00	15,499	348,727.50	590	388
Totals.....	49,500	\$3,107,636.00	54,809	\$3,297,873.50	1,486	1,438

Number of dogs in county March 1, 1917, 1,405; March 1, 1918, 1,744.

Number of sheep killed by dogs, year ending March 1, 1917, 17; March 1, 1918, 12.

Number of sheep killed by wolves, year ending March 1, 1917, 27; March 1, 1918, 10.

Mortality of swine from cholera, year ending March 1, 1917, 123; March 1, 1918, 35.

FARM AND CROP STATISTICS.—ALLEN COUNTY.

Table showing acres, product and value of field crops in the county for 1917 and 1918.

Crops.	1917.			1918.		
	Acres.	Product.	Value.	Acres.	Product.	Value.
Winter wheat.....bu.	7,444	163,768	\$343,912.80	25,973	571,406	\$1,154,240.12
Spring wheat.....bu.				25	525	1,050.00
Corn.....bu.	63,232	1,327,872	1,420,823.04	54,262	325,572	494,869.44
Oats.....bu.	18,053	631,855	379,113.00	22,444	673,320	457,857.60
Rye.....bu.	1,327	23,886	38,934.18	1,745	31,410	48,685.50
Barley.....bu.	29	754	769.08	41	820	836.40
Emmer ("speltz").....bu.						
Irish potatoes.....bu.	530	38,160	61,056.00	660	32,340	46,569.60
Sweet potatoes.....bu.	9	720	1,137.60	6	360	568.80
Cowpeas.....tons	114	142	2,272.00	69	104	1,716.00
Flax.....bu.	9,290	74,320	200,664.00	9,213	46,065	149,711.25
Broom corn.....lbs.	2,523	1,198,425	179,763.75	2,591	880,940	105,712.80
Millet.....tons	519	908	9,988.00	468	585	7,020.00
Sugar beets.....tons				1	6	57.00
Sorghum for syrup.....gals.	102	6,222	4,355.40	354	19,470	21,417.00
for seed.....bu.	38	418	627.00	268	3,216	5,788.80
for hay.....tons	965	3,136	15,680.00	1,235	3,705	25,935.00
Milo for grain.....bu.	947	15,152	18,333.92	891	8,019	12,429.45
for stover*.....tons		2,605	11,722.50		1,782	8,910.00
for hay.....tons	31	101	555.50	201	603	3,919.50
Kafir for grain.....bu.	22,543	428,317	578,227.95	14,489	101,423	157,205.65
for stover*.....tons		61,994	247,976.00		47,089	258,989.50
for hay.....tons	171	598	3,438.50	39	117	760.50
Feterita for grain.....bu.	343	6,174	7,840.98	466	4,660	7,456.00
for stover*.....tons		858	3,861.00		1,398	5,592.00
for hay.....tons	476	1,547	7,735.00	107	482	2,892.00
Sudan grass.....tons	176	572	5,720.00	309	1,004	10,040.00
Jerusalem corn.....tons	5	17	97.75	5	15	97.50
Alfalfa.....tons	3,547	10,996	230,916.00	4,213	11,586	289,650.00
Timothy.....tons	6,081			5,235		
Clover.....tons	3,063			1,792		
Blue grass.....tons	2,544	† 8,862	146,223.00	3,893	‡ 7,338	161,436.00
Sweet clover.....tons	532			612		
Orchard grass.....tons	10			10		
Other tame grasses.....tons	892			354		
Prairie hay.....tons	25,537	25,537	408,592.00	24,478	18,359	348,821.00
Totals.....	171,073		\$4,330,335.95	176,449		\$3,790,234.41

Corn on hand March 1, 1917, 76,212 bushels; March 1, 1918, 282,541 bushels.

Wheat on hand March 1, 1917, 125 bushels; March 1, 1918, 4,435 bushels.

Prairie grass for pasture March 1, 1918: Acres fenced, 64,830; acres not fenced, 649.

* Forage after harvesting grain. † Product of 1916. ‡ Product of 1917.

SUMMARY.—ALLEN COUNTY.

Showing quantity and value of farm products in the county for 1917 and 1918.

Products.	1917.		1918.	
	Quantity.	Value.	Quantity.	Value.
Field crops.....acres	171,073	\$4,330,335.95	176,449	\$3,790,234.41
Animals slaughtered or sold for slaughter.....		413,823.00		621,763.00
Poultry and eggs sold.....		163,820.00		184,951.00
Wool clip.....lbs.	10,091	2,825.48	13,076	7,061.04
Cheese.....lbs.	30	5.10	25	4.50
Butter.....lbs.	649,605	207,482.55	1,104,471	457,156.44
Condensed milk.....lbs.				
Milk sold.....		106,209.00		161,960.00
Honey and beeswax.....lbs.	25,327	4,619.36	9,935	2,486.25
Wood marketed.....		1,822.00		4,762.00
Totals.....		\$5,230,942.44		\$5,230,378.64

Number of cream separators March 1, 1917, 956; March 1, 1918, 1,007.

Number of silos March 1, 1917, 85; March 1, 1918, 82.

Number of tractors March 1, 1917, 23; March 1, 1918, 32.

ANDERSON COUNTY.

Organized in 1855; area, 371,200 acres; population, 12,230; rank in population, 55; assessed valuation, \$27,349,190; miles of railroad, main track, 130.54; county seat, Garnett; population, 2,001.

POPULATION AND VALUATION.—ANDERSON COUNTY.

Table showing total population, by townships and cities, for 1917 and 1918, and the assessed valuation of the municipal townships and cities of 1918.

Townships (and cities).	Population.		Assessed valuation of property, 1918.				
	1917.	1918.	Land.	City lots.	Personal.	Railroad, etc.	Total.
The county.....	11,890	12,230	\$11,612,620	\$1,954,655	\$5,680,215	\$8,101,700	\$27,349,190
Indian Creek tp...	489	550	\$877,590	\$4,975	\$232,965	\$207,442	\$1,322,972
Jackson tp.....	685	738	816,030	45,700	290,415	299,796	1,451,941
Lincoln tp.....	668	693	827,800	14,865	192,820	207,366	1,242,851
Lone Elm tp.....	653	675	994,850	25,370	496,480	143,394	1,660,094
Garnett.....	2,016	2,001	.....	1,154,480	755,695	181,065	2,091,240
Monroe tp.....	639	689	748,135	.....	340,785	1,201,584	2,290,504
Colony.....	476	489	.....	165,435	139,840	45,452	350,727
Ozark tp.....	509	542	702,545	.....	195,335	1,287,399	2,185,279
Putnam tp.....	371	472	701,095	.....	252,265	366,521	1,319,881
Harris.....	128	133	.....	.....	.....	.....	.....
Reeder tp.....	862	866	1,488,580	47,050	743,880	227,184	2,506,694
Kincaid.....	387	377	.....	107,435	141,630	47,118	295,983
Rich tp.....	588	668	1,017,525	4,175	331,710	776,674	2,130,084
Union tp.....	497	513	515,200	.....	173,765	394	689,359
Greeley.....	456	467	.....	174,015	193,830	21,877	389,722
Walker tp.....	296	328	316,480	.....	104,545	500,495	921,520
Mont Ida.....	139	139	580,670	37,350	244,930	1,140,392	2,003,342
Washington tp...	389	417	929,755	40,625	325,195	1,072,054	2,367,629
Welda tp.....	652	488	.....	.....	.....	.....	.....
Westphalia.....	332	310	1,096,365	133,180	524,130	375,493	2,129,168
Westphalia tp...	658	675	.....	.....	.....	.....	.....

LIVESTOCK.—ANDERSON COUNTY.

Table showing number, value and mortality of livestock in the county for 1917 and 1918.

Livestock.	1917.		1918.		Mortality.	
	Number.	Value.	Number.	Value.	1917.	1918.
Horses.....	9,513	\$1,141,560.00	10,138	\$1,125,318.00	156	114
Mules and asses.....	2,310	311,850.00	1,908	267,120.00	17	17
Milk cows.....	7,851	588,825.00	9,905	812,210.00	150	122
Other cattle.....	19,010	950,500.00	20,991	1,133,514.00	229	258
Sheep.....	1,943	21,373.00	2,873	35,912.50	13	25
Swine.....	12,759	261,559.50	18,367	413,257.50	933	494
Totals.....	53,386	\$3,275,667.50	64,182	\$3,787,332.00	1,498	1,030

Number of dogs in county March 1, 1917, 1,423; March 1, 1918, 1,343.

Number of sheep killed by dogs, year ending March 1, 1918, 1.

Number of sheep killed by wolves, year ending March 1, 1917, 3.

Mortality of swine from cholera, year ending March 1, 1917, 639; March 1, 1918, 84.

FARM AND CROP STATISTICS.—ANDERSON COUNTY.

Table showing acres, product and value of field crops in the county for 1917 and 1918.

Crops.	1917.			1918.		
	Acres.	Product.	Value.	Acres.	Product.	Value.
Winter wheat.....bu.	4,576	100,672	\$203,357.44	23,401	514,822	\$1,050,236.88
Spring wheat.....bu.	2	42	82.32	20	420	848.40
Corn.....bu.	65,288	1,305,760	1,397,163.20	52,759	369,313	557,662.63
Oats.....bu.	21,976	813,112	471,604.96	28,464	853,920	589,204.80
Rye.....bu.	390	8,190	13,349.70	730	12,410	19,235.50
Barley.....bu.	19	475	475.00	31	620	632.40
Emmer ("speltz").....bu.						
Irish potatoes.....bu.	556	33,360	50,040.00	592	29,600	44,400.00
Sweet potatoes.....bu.	4	200	290.00	10	500	875.00
Cowpeas.....tons	40	50	800.00	10	15	247.50
Flax.....bu.	604	3,925	10,600.20	304	1,672	5,434.00
Broom corn.....lbs.	55	22,000	3,300.00	21	6,300	693.00
Millet.....tons	149	261	2,610.00	170	255	2,805.00
Sugar beets.....tons						
Sorghum for syrup.....gals.	95	5,700	3,990.00	181	9,955	10,950.50
for seed.....bu.	160	3,200	4,800.00	281	2,810	5,058.00
for hay.....tons	1,151	4,604	32,228.00	1,459	3,648	32,832.00
Milo for grain.....bu.	158	2,528	3,160.00	498	3,984	6,175.20
for stover*.....tons		553	2,765.00		1,494	7,470.00
for hay.....tons	5	20	120.00	134	402	2,613.00
Kafir for grain.....bu.	20,075	301,125	451,687.50	14,656	87,936	140,697.60
for stover*.....tons		70,263	316,183.50		47,632	238,160.00
for hay.....tons	80	360	2,160.00	43	140	910.00
Peterita for grain.....bu.	303	7,575	11,362.50	451	5,412	8,659.20
for stover*.....tons		1,212	4,848.00		1,353	6,765.00
for hay.....tons	185	740	4,440.00	115	460	3,220.00
Sudan grass.....tons	239	956	8,604.00	186	558	5,580.00
Jerusalem corn.....tons	15	67	402.00	20	65	422.50
Alfalfa.....tons	3,330	10,323	185,814.00	4,543	10,222	255,550.00
Timothy.....tons	9,488			9,445		
Clover.....tons	9,852			6,839		
Blue grass.....tons	3,253			2,880		
Sweet clover.....tons	127	† 12,766	204,256.00	53	‡ 12,993	285,846.00
Orchard grass.....tons				53		
Other tame grasses.....tons	183			226		
Prairie hay.....tons	28,151	28,151	394,114.00	29,641	22,230	444,600.00
Totals.....	170,509		\$3,784,607.32	178,215		\$3,727,784.11

Corn on hand March 1, 1917, 78,845 bushels; March 1, 1918, 277,347 bushels.

Wheat on hand March 1, 1917, 418 bushels; March 1, 1918, 4,297 bushels.

Prairie grass for pasture March 1, 1918: Acres fenced, 86,291.

* Forage after harvesting grain. † Product of 1916. ‡ Product of 1917.

SUMMARY.—ANDERSON COUNTY.

Showing quantity and value of farm products in the county for 1917 and 1918.

Products.	1917.		1918.	
	Quantity.	Value.	Quantity.	Value.
Field crops.....acres	170,509	\$3,784,607.32	178,215	\$3,727,784.11
Animals slaughtered or sold for slaughter.....		655,472.00		964,351.00
Poultry and eggs sold.....		153,904.00		175,762.00
Wool clip.....lbs.	3,851	1,078.28	7,875	4,252.50
Cheese.....lbs.	50	10.50	725	130.50
Butter.....lbs.	257,070	80,018.70	224,834	89,952.30
Condensed milk.....lbs.				
Milk sold.....		132,328.00		212,858.00
Honey and beeswax.....lbs.	22,653	4,078.84	5,085	1,271.65
Wood marketed.....		2,797.00		5,152.00
Totals.....		\$4,814,294.64		\$5,181,514.06

Number of cream separators March 1, 1917, 855; March 1, 1918, 966.

Number of silos March 1, 1917, 173; March 1, 1918, 174.

Number of tractors March 1, 1917, 21; March 1, 1918, 41.

ATCHISON COUNTY.

Organized in 1855; area, 273,883 acres; population, 26,960; rank in population, 12; assessed valuation, \$45,065,751; miles of railroad, main track, 91.014; county seat, Atchison; population, 15,240.

POPULATION AND VALUATION.—ATCHISON COUNTY.

Table showing total population, by townships and cities, for 1917 and 1918, and the assessed valuation of the municipal townships and cities of 1918.

Townships (and cities).	Population.		Assessed valuation of property, 1918.				
	1917.	1918.	Land.	City lots.	Personal.	Railroad, etc.	Total.
The county	26,960	†26,960	\$19,190,368	\$8,167,395	\$12,985,378	\$4,722,610	\$45,065,751
Effingham.....	*			\$254,050	\$320,985	\$23,388	\$598,423
Benton tp.....	1,805	1,805	\$2,870,092	1,600	535,120	223,791	3,630,603
Center tp.....	1,112	1,112	2,448,566	38,140	587,240	577,343	3,651,289
Muscotah.....	*			140,830	188,385	24,418	353,633
Grasshopper tp...	1,359	1,359	2,853,919		630,665	216,036	3,700,620
Kapioma tp.....	975		1,944,142	20,680	448,020	149,515	2,552,357
Lancaster.....	*			40,225	152,310	16,277	208,812
Huron.....	*			43,360	77,530	27,811	148,701
Lancaster tp.....	1,511	1,511	3,189,167	2,510	645,115	397,707	4,234,499
Mt. Pleasant tp...	1,263		1,984,693	61,380	451,655	782,399	3,280,127
Shannon tp.....	2,944		2,805,446	61,370	1,038,895	756,774	4,662,485
Walnut tp.....	751		1,094,343	46,695	326,525	711,193	2,178,756
Atchison.....	15,240			7,456,555	7,582,933	815,958	15,855,446

* Not reported separately from township in 1917.

† 1917 figures used.

LIVESTOCK.—ATCHISON COUNTY.

Table showing number, value and mortality of livestock in the county for 1917 and 1918.

Livestock.	1917.		1918.		Mortality.	
	Number.	Value.	Number.	Value.	1917.	1918.
Horses.....	7,485	\$898,200.00	7,567	\$839,937.00	240	229
Mules and asses.....	2,316	312,660.00	1,910	267,400.00	30	39
Milk cows.....	3,329	249,675.00	4,620	378,840.00	123	204
Other cattle.....	15,217	760,850.00	12,833	692,982.00	322	560
Sheep.....	891	9,801.00	1,730	21,625.00	126	32
Swine.....	16,434	336,897.00	18,399	413,977.50	1,280	954
Totals.....	45,672	\$2,568,083.00	47,059	\$2,614,761.50	2,121	2,018

Number of dogs in county March 1, 1917, 1,195; March 1, 1918, 1,214.

Number of sheep killed by dogs, year ending March 1, 1917, 7; March 1, 1918, 6.

Number of sheep killed by wolves, year ending March 1, 1917, 2; March 1, 1918, 6.

Mortality of swine from cholera, year ending March 1, 1917, 951; March 1, 1918, 419.

FARM AND CROP STATISTICS.—ATCHISON COUNTY.

Table showing acres, product and value of field crops in the county for 1917 and 1918.

Crops.	1917.			1918.		
	Acres.	Product.	Value.	Acres.	Product.	Value.
Winter wheat.....bu.	29,409	470,544	\$983,436.96	52,216	939,888	\$1,945,568.16
Spring wheat.....bu.				20	360	738.00
Corn.....bu.	67,369	1,549,487	1,766,415.18	50,051	1,101,122	1,486,514.70
Oats.....bu.	27,064	1,190,816	690,673.28	21,017	525,425	352,034.75
Rye.....bu.	258	4,644	7,430.40	220	3,960	6,534.00
Barley.....bu.	29	870	878.70	120	3,000	3,060.00
Emmer ("speltz").....bu.				4	92	66.24
Irish potatoes.....bu.	1,216	80,256	116,371.20	1,298	57,112	85,096.88
Sweet potatoes.....bu.	67	5,226	8,257.08	45	3,960	6,930.00
Cowpeas.....tons	22	27	432.00			
Flax.....bu.						
Broom corn.....lbs.	26	6,500	910.00			
Millet.....tons	220	440	4,400.00	142	284	3,124.00
Sugar beets.....tons	1	10	55.00			
Sorghum for syrup.....gals.	24	1,680	1,176.00	24	1,680	1,848.00
for seed.....bu.	45	405	607.50	51	765	1,415.25
for hay.....tons	265	994	7,952.00	172	516	4,644.00
Milo for grain.....bu.	155	1,860	2,604.00	2	32	49.60
for stover*.....tons		387	1,548.00		6	36.00
for hay.....tons				1	3	22.50
Kafir for grain.....bu.	644	6,440	9,660.00	245	6,125	9,800.00
for stover*.....tons		1,288	5,152.00		858	6,864.00
for hay.....tons	57	228	1,368.00	172	602	6,020.00
Feterita for grain.....bu.	4	80	104.00	21	315	488.25
for stover*.....tons		16	64.00		63	346.50
for hay.....tons				12	48	360.00
Sudan grass.....tons	17	51	510.00	38	95	1,045.00
Jersusalem corn.....tons	2	8	48.00			
Alfalfa.....tons	8,590	25,770	515,400.00	6,901	17,253	431,325.00
Timothy.....tons	11,156			8,772		
Clover.....tons	8,064			8,303		
Blue grass.....tons	35,08	† 22,754	386,818.00	25,085	‡ 15,583	327,243.00
Sweet clover.....tons	163			25		
Orchard grass.....tons						
Other tame grasses.....tons	16			3		
Prairie hay.....tons	1,986	1,986	31,776.00	2,214	2,214	42,066.00
Totals.....	191,958		\$4,544,047.30	177,174		\$4,723,239.83

Corn on hand March 1, 1917, 169,835 bushels; March 1, 1918, 328,603 bushels.

Wheat on hand March 1, 1917, 10,180 bushels; March 1, 1918, 11,430 bushels.

Prairie grass for pasture March 1, 1918: Acres fenced, 12,098; acres not fenced, 64.

* Forage after harvesting grain. † Product of 1916. ‡ Product of 1917.

SUMMARY.—ATCHISON COUNTY.

Showing quantity and value of farm products in the county for 1917 and 1918.

Products.	1917.		1918.	
	Quantity.	Value.	Quantity.	Value.
Field crops.....acres	191,958	\$4,544,047.30	177,174	\$4,723,239.83
Animals slaughtered or sold for slaughter.....		784,616.00		1,138,480.00
Poultry and eggs sold.....		139,838.00		135,251.00
Wool clip.....lbs.	3,986	1,116.08	3,466	1,871.64
Cheese.....lbs.				
Butter.....lbs.	535,823	172,191.84	624,326	257,823.18
Condensed milk.....lbs.				
Milk sold.....		107,960.00		128,225.00
Honey and beeswax.....lbs.	32,152	5,806.36	1,498	377.50
Wood marketed.....		1,657.00		1,552.00
Totals.....		\$5,757,232.58		\$6,386,820.15

Number of cream separators March 1, 1917, 829; March 1, 1918, 780.

Number of silos March 1, 1917, 194; March 1, 1918, 97.

Number of tractors March 1, 1917, 35; March 1, 1918, 31.

BARBER COUNTY.

Organized in 1873; area, 725,567 acres; population, 9,581; rank in population, 69; assessed valuation, \$24,805,168; miles of railroad, main track, 99.34; county seat, Medicine Lodge; population, 1,266.

POPULATION AND VALUATION.—BARBER COUNTY.

Table showing total population, by townships and cities, for 1917 and 1918, and the assessed valuation of the municipal townships and cities of 1918.

Townships (and cities).	Population.		Assessed valuation of property, 1918.				
	1917.	1918.	Land.	City lots.	Personal.	Railroad, etc.	Total.
The county	10,143	9,581	\$11,603,170	\$1,622,665	\$7,653,680	\$3,925,653	\$24,805,168
Ætna tp.	158	135	\$677,080	\$3,665	\$442,690		\$1,123,435
Cedar tp.	308	264	560,620		283,205	\$78,218	922,043
Deerhead tp.	123	118	347,770		244,170		591,940
Eagle tp.	337	304	687,340		401,830	662	1,089,832
Elm Mills tp.	312	314	536,250		254,390	1,776	792,416
Hardtner	353	351		92,825	198,110	18,749	309,684
Elwood tp.	324	311	895,195		347,310	15,407	1,257,912
Hazelton	313	302		110,135	146,370	68,252	324,757
Hazelton tp.	353	307	752,160		257,790	436,168	1,446,118
Kiowa	1,486	1,377		559,390	493,400	149,887	1,202,677
Kiowa tp.	336	352	785,970		419,445	486,881	1,691,896
Lake City tp.	373	344	325,900	54,600	645,750	288,550	1,314,800
McAdoo tp.	157	139	332,300		188,400	442	521,142
Medicine Lodge ..	1,412	1,266		555,170	485,220	75,914	1,116,304
Medicine Lodge tp.	864	874	1,599,130		662,860	574,399	2,836,389
Mingona tp.	320	275	427,210		244,360	295,255	966,825
Moore tp.	341	319	617,920		291,900	233,629	1,143,449
Nippawalla tp.	276	236	616,000	14,505	269,780	292,582	1,192,867
Ridge tp.	151	143	393,960		95,480	982	490,422
Sharon	322	302		121,190	156,050	26,305	303,545
Sharon tp.	502	498	750,175		226,210	196,299	1,172,684
Sun City tp.	261	254	299,750	22,695	229,320	202,826	754,591
Turkey Creek tp. .	223	198	332,330		182,530	252,216	767,076
Isabel	244	250		88,490	218,700	26,922	334,112
Valley tp.	294	339	666,510		268,410	203,332	1,138,252

LIVESTOCK.—BARBER COUNTY.

Table showing number, value and mortality of livestock in the county for 1917 and 1918.

Livestock.	1917.		1918.		Mortality.	
	Number.	Value.	Number.	Value.	1917.	1918.
Horses	9,866	\$1,183,920.00	9,643	\$1,070,373.00	277	301
Mules and asses	4,122	556,470.00	4,001	560,140.00	34	62
Milk cows	3,315	248,625.00	4,076	334,232.00	130	137
Other cattle	47,385	2,369,250.00	46,693	2,521,422.00	533	957
Sheep	2,358	25,938.00	3,029	37,862.50	44	116
Swine	9,687	198,583.50	9,285	208,912.50	470	567
Totals	76,733	\$4,582,786.50	76,727	\$4,732,942.00	1,488	2,140

Number of dogs in county March 1, 1917, 1,057; March 1, 1918, 1,173.

Number of sheep killed by dogs, year ending March 1, 1917, 30; March 1, 1918, 5.

Number of sheep killed by wolves, year ending March 1, 1918, 11.

Mortality of swine from cholera, year ending March 1, 1917, 843; March 1, 1918, 399.

FARM AND CROP STATISTICS.—BARBER COUNTY.

Table showing acres, product and value of field crops in the county for 1917 and 1918.

Crops.	1917.			1918.		
	Acres.	Product.	Value.	Acres.	Product.	Value.
Winter wheat.....bu.	106,929	962,361	\$1,982,463.66	92,957	1,115,484	\$2,230,968.00
Spring wheat.....bu.						
Corn.....bu.	60,404	483,232	579,878.40	42,740	299,180	448,770.00
Oats.....bu.	6,165	73,980	53,265.60	11,400	228,000	173,280.00
Rye.....bu.	1,947	9,735	17,036.25	1,253	15,036	24,057.60
Barley.....bu.	597	7,164	7,092.36	260	3,640	3,822.00
Emmer ("speltz").....bu.	10	120	92.40			
Irish potatoes.....bu.	254	6,858	10,629.90	266	1,330	2,061.50
Sweet potatoes.....bu.	11	880	1,628.00	11	143	321.75
Cowpeas.....tons	20	25	400.00	3	5	82.50
Flax.....bu.						
Broom corn.....lbs.	5	2,000	280.00	55	16,500	1,650.00
Millet.....tons	319	479	4,790.00	393	393	4,716.00
Sugar beets.....						
Sorghum for syrup.....gals.	90			78		
for seed.....bu.	1,086	11,946	16,963.32	3,009	33,099	66,198.00
for hay.....tons	5,652	14,130	70,650.00	9,543	26,243	196,822.50
Milo for grain.....bu.	2,272	27,264	36,261.12	5,010	50,100	75,150.00
for stover*.....tons		2,272	9,088.00		10,020	60,120.00
for hay.....tons	59	147	735.00	100	225	1,637.50
Kafir for grain.....bu.	26,517	371,238	501,171.30	40,795	530,335	795,502.50
for stover*.....tons		53,034	212,136.00		91,789	501,839.50
or hay.....tons	1,551	4,265	21,325.00	1,262	3,471	26,032.50
Peterita for grain.....bu.	1,469	22,035	28,645.50	3,972	51,636	77,454.00
for stover*.....tons		2,204	8,816.00		7,944	39,720.00
for hay.....tons	308	770	4,620.00	480	1,440	10,030.00
Sudan grass.....tons	832	2,496	19,968.00	2,482	6,826	78,499.00
Jerusalem corn.....tons	33	90	450.00	35	96	720.00
Alfalfa.....tons	8,444	23,643	449,217.00	8,228	16,456	345,576.00
Timothy.....tons						
Clover.....tons	1			105		
Blue grass.....tons						
Sweet clover.....tons	781	† 108	1,620.00	471	‡ 1,062	20,178.00
Orchard grass.....tons				15		
Other tame grasses.....tons	12			3		
Prairie hay.....tons	1,122	1,122	15,708.00	2,459	2,459	36,885.00
Totals.....	226,890		\$4,054,930.81	227,385		\$5,225,193.85

Corn on hand March 1, 1917, 71,334 bushels; March 1, 1918, 23,162 bushels.

Wheat on hand March 1, 1917, 30,610 bushels; March 1, 1918, 25,510 bushels.

Prairie grass for pasture March 1, 1918: Acres fenced, 297,675; acres not fenced, 3,505.

* Forage after harvesting grain. † Product of 1916. ‡ Product of 1917.

SUMMARY.—BARBER COUNTY.

Showing quantity and value of farm products in the county for 1917 and 1918.

Products.	1917.		1918.	
	Quantity.	Value.	Quantity.	Value.
Field crops.....acres	226,890	\$4,054,930.81	227,385	\$5,225,193.85
Animals slaughtered or sold for slaughter.....		506,214.00		976,731.00
Poultry and eggs sold.....		78,786.00		77,774.00
Wool lip.....lbs.	2,393	670.04	4,195	2,265.30
Cheese.....lbs.	110	18.70		
Butter.....lbs.	118,030	35,709.00	89,719	34,990.41
Condensed milk.....lbs.				
Milk sold.....		40,985.00		58,679.00
Honey and beeswax.....lbs.	1,614	307.52	1,313	328.40
Wood marketed.....		471.00		73.00
Totals.....		\$4,718,092.07		\$6,376,034.96

Number of cream separators March 1, 1917, 485; March 1, 1918, 571.

Number of silos March 1, 1917, 210; March 1, 1918, 173.

Number of tractors March 1, 1917, 51; March 1, 1918, 60.

BARTON COUNTY.

Organized in 1872; area, 574,603 acres; population, 17,872; rank in population, 32; assessed valuation, \$44,629,287; miles of railroad, main track, 93.67; county seat, Great Bend; population, 5,023.

POPULATION AND VALUATION.—BARTON COUNTY.

Table showing total population, by townships and cities, for 1917 and 1918, and the assessed valuation of the municipal townships and cities of 1918.

Townships (and cities).	Population.		Assessed valuation of property, 1918.				
	1917.	1918.	Land.	City lots.	Personal.	Railroad, etc.	Total.
The county	18,482	17,872	\$25,425,590	\$5,398,930	\$9,524,650	\$4,280,117	\$44,629,287
Albion tp.	300	252	\$1,007,230	.....	\$195,140	\$117,134	\$1,319,504
Beaver tp.	355	356	980,800	\$4,800	213,160	1,472	1,200,232
Buffalo tp.	399	392	1,221,760	21,670	297,710	230,959	1,772,099
Cheyenne tp.	629	691	1,444,010	28,890	340,700	272,397	2,085,997
Clarence tp.	300	293	1,177,190	.....	248,120	1,131	1,426,441
Cleveland tp.	306	287	928,140	.....	113,580	2,329	1,044,049
Comanche tp.	713	639	1,561,000	.....	435,180	.....	1,996,180
Eureka tp.	314	313	1,129,910	.....	244,040	181,124	1,555,074
Fairview tp.	394	455	940,150	39,290	182,100	196	1,161,736
Grant tp.	344	319	902,220	.....	166,920	124,271	1,193,411
Great Bend	5,039	5,023	.....	3,093,780	2,087,280	196,792	5,377,852
Great Bend tp.	444	440	1,455,110	7,280	413,950	529,569	2,405,909
Hoisington	2,352	2,172	.....	962,070	604,000	101,960	1,668,030
Homestead tp.	731	667	1,786,620	36,170	357,400	663,167	2,843,357
Cliffin.	582	573	.....	312,010	445,800	27,872	785,682
Independent tp.	351	343	1,186,010	.....	238,000	77,293	1,501,303
Ellinwood	962	903	.....	651,150	598,880	92,837	1,342,867
Lakin tp.	601	624	2,156,010	.....	387,490	648,009	3,191,509
Liberty tp.	392	301	1,020,710	.....	214,980	311,494	1,547,184
Logan tp.	393	379	1,180,210	.....	134,440	160,747	1,475,397
Pawnee Rock	469	420	.....	187,260	337,100	44,860	569,220
Pawnee Rock tp.	353	324	1,083,070	.....	202,840	154,891	1,440,801
South Bend tp.	335	330	1,156,260	.....	241,000	1,724	1,398,984
Union tp.	348	350	968,550	1,240	200,820	.....	1,170,610
Walnut tp.	619	593	1,179,380	53,320	479,750	337,889	2,050,339
Wheatland tp.	457	433	961,250	.....	144,270	.....	1,105,520

LIVESTOCK.—BARTON COUNTY.

Table showing number, value and mortality of livestock in the county for 1917 and 1918.

Livestock.	1917.		1918.		Mortality.	
	Number.	Value.	Number.	Value.	1917.	1918.
Horses	12,838	\$1,540,560.00	12,878	\$1,429,458.00	342	443
Mules and asses	5,261	710,235.00	3,283	459,620.00	35	42
Milk cows	6,224	466,800.00	7,256	594,992.00	104	163
Other cattle	16,722	836,100.00	18,115	978,210.00	444	807
Sheep	252	2,772.00	1,156	14,450.00	2	19
Swine	6,641	136,140.50	8,564	192,690.00	260	486
Totals	47,938	\$3,692,607.50	51,252	\$3,669,420.00	1,187	1,960

Number of dogs in county March 1, 1917, 1,445; March 1, 1918, 1,328.

Number of sheep killed by dogs, year ending March 1, 1917, 11; March 1, 1918, 2.

Number of sheep killed by wolves, year ending March 1, 1918, 1.

Mortality of swine from cholera, year ending March 1, 1917, 46; March 1, 1918, 111.

FARM AND CROP STATISTICS.—BARTON COUNTY.

Table showing acres, product and value of field crops in the county for 1917 and 1918.

Crops.	1917.			1918.		
	Acres.	Product.	Value.	Acres.	Product.	Value.
Winter wheat.....bu.	68,745	481,215	\$938,369.25	235,704	3,299,856	\$6,533,714.88
Spring wheat.....bu.				20	220	435.60
Corn.....bu.	194,830	1,363,810	1,554,743.40	69,012	345,060	507,238.20
Oats.....bu.	32,245	354,695	248,286.50	22,961	459,220	344,415.00
Rye.....bu.	479	3,832	6,131.20	1,016	13,208	21,132.80
Barley.....bu.	21,560	258,720	258,720.00	13,393	241,074	243,484.74
Emmer ("speltz").....bu.						
Irish potatoes.....bu.	654	31,392	50,227.20	817	24,510	40,441.50
Sweet potatoes.....bu.	33	2,640	4,936.80			
Cowpeas.....tons	10	12	192.00	10	15	247.50
Flax.....bu.						
Broom corn.....lbs.	30	9,000	1,260.00	10	3,000	375.00
Millet.....tons	439	659	6,590.00	260	520	6,240.00
Sugar beets.....tons						
Sorghum for syrup.....gals.	39			16	400	440.00
for seed.....bu.	957	7,656	13,015.20	1,026	9,234	17,544.60
for hay.....tons	6,994	17,485	122,395.00	5,149	10,298	87,533.00
Milo for grain.....bu.	2,538	12,690	17,131.50	3,517	42,204	66,682.32
for stover*.....tons		5,076	25,380.00		7,913	47,478.00
for hay.....tons	189	284	2,272.00	191	478	3,585.00
Kafir for grain.....bu.	10,026	130,338	182,473.20	11,537	69,222	108,678.54
for stover*.....tons		20,052	130,338.00		23,074	161,518.00
for hay.....tons	1,608	3,216	25,728.00	917	2,293	20,637.00
Feterita for grain.....bu.	2,776	41,640	59,545.20	1,882	20,702	32,088.10
for stover*.....tons		4,858	21,861.00		3,764	22,584.00
for hay.....tons	70	140	1,120.00	291	800	6,400.00
Sudan grass.....tons	183	366	4,392.00	417	1,251	12,510.00
Jerusalem corn.....tons	3	6	48.00	35	88	792.00
Alfalfa.....tons	8,530	25,590	435,030.00	9,602	26,406	554,526.00
Timothy.....tons						
Clover.....tons						
Blue grass.....tons						
Sweet clover.....tons	18	†		18	†	
Orchard grass.....tons						
Other tame grasses.....tons				5		
Prairie hay.....tons	11,857	11,857	165,998.00	13,317	9,988	159,808.00
Totals.....	364,813		\$4,276,183.45	391,123		\$9,000,529.78

Corn on hand March 1, 1917, 19,785 bushels; March 1, 1918, 149,052 bushels.

Wheat on hand March 1, 1917, 174,925 bushels; March 1, 1918, 43,877 bushels.

Prairie grass for pasture March 1, 1918: Acres fenced, 120,476; acres not fenced, 3,741.

* Forage after harvesting grain. † Product of 1916. ‡ Product of 1917.

SUMMARY.—BARTON COUNTY.

Showing quantity and value of farm products in the county for 1917 and 1918.

Products.	1917.		1918.	
	Quantity.	Value.	Quantity.	Value.
Field crops.....acres	364,813	\$4,276,183.45	391,123	\$9,000,529.78
Animals slaughtered or sold for slaughter.....		337,327.00		450,444.00
Poultry and eggs sold.....		145,778.00		144,138.00
Wool clip.....lbs.	228	63.84	250	135.00
Cheese.....lbs.	120	20.40	11	1.98
Butter.....lbs.	1,406,837	460,055.73	1,560,814	652,183.14
Condensed milk.....lbs.				
Milk sold.....		86,454.00		121,759.00
Honey and beeswax.....lbs.	1,265	252.70	1,533	383.25
Wood marketed.....		17.00		121.00
Totals.....		\$5,306,152.12		\$10,369,695.15

Number of cream separators March 1, 1917, 952; March 1, 1918, 963.

Number of silos March 1, 1917, 62; March 1, 1918, 91.

Number of tractors March 1, 1917, 110; March 1, 1918, 137.

BOURBON COUNTY.

Organized in 1855; area, 406,615 acres; population, 25,220; rank in population, 17; assessed valuation, \$33,066,589; miles of railroad, main track, 124.14; county seat, Fort Scott; population, 12,325.

POPULATION AND VALUATION.—BOURBON COUNTY.

Table showing total population, by townships and cities, for 1917 and 1918, and the assessed valuation of the municipal townships and cities of 1918.

Townships (and cities).	Population.		Assessed valuation of property, 1918.				
	1917.	1918.	Land.	City lots.	Personal.	Railroad, etc.	Total.
The county	25,378	25,220	\$13,728,371	\$5,396,773	\$8,645,864	\$5,295,581	\$33,066,589
Drywood tp.	1,179	1,214	\$1,044,373	\$49,020	\$431,307	\$583,108	\$2,107,808
Franklin tp.	1,059	1,043	1,232,943	3,828	388,017	229	1,625,017
Fulton.	406	401	.....	129,725	191,880	32,961	354,566
Freedom tp.	746	737	1,082,274	4,445	326,954	200,302	1,613,975
Bronson.	625	575	.....	230,535	298,650	13,372	542,557
Uniontown.	290	248	2,135	74,625	134,390	17,959	226,974
Marion tp.	1,326	1,312	2,004,418	.....	591,965	400,952	2,997,335
Redfield.	235	223	.....	75,800	88,915	12,814	177,529
Marmaton tp.	962	944	1,171,420	3,620	360,042	612,784	2,147,866
Mill Creek tp.	926	900	1,062,738	20,330	375,925	173,700	1,632,693
Osage tp.	936	975	1,198,557	9,825	510,770	355,663	2,074,815
Pawnee tp.	889	908	903,290	46,625	409,878	457,698	1,817,491
Scott tp.	1,749	1,735	2,112,239	8,565	689,497	1,316,650	4,126,951
Mapleton.	231	222	.....	78,065	129,030	14,553	221,648
Timber Hill tp.	699	689	725,811	.....	326,806	116,563	1,169,180
Walnut tp.	755	769	1,190,308	.....	370,283	147,473	1,708,064
Fort Scott.	12,395	12,325	.....	1,661,765	3,021,555	838,800	8,522,120

LIVESTOCK.—BOURBON COUNTY.

Table showing number, value and mortality of livestock in the county for 1917 and 1918.

Livestock.	1917.		1918.		Mortality.	
	Number.	Value.	Number.	Value.	1917.	1918.
Horses.	11,471	\$1,376,520.00	11,572	\$1,284,492.00	310	248
Mules and asses.	3,329	449,415.00	2,511	351,540.00	30	27
Milk cows.	8,392	629,400.00	9,597	786,954.00	234	194
Other cattle.	18,340	917,000.00	19,254	1,039,716.00	497	575
Sheep.	1,616	17,776.00	2,095	26,187.50	59	91
Swine.	13,677	280,378.50	16,467	370,507.50	408	1,447
Totals.	56,825	\$3,670,489.50	61,496	\$3,859,397.00	1,538	2,582

Number of dogs in county March 1, 1917, 1,455; March 1, 1918, 1,682.

Number of sheep killed by dogs, year ending March 1, 1917, 10; March 1, 1918, 15.

Number of sheep killed by wolves, year ending March 1, 1917, 5; March 1, 1918, 12.

Mortality of swine from cholera, year ending March 1, 1917, 228; March 1, 1918, 1,055.

FARM AND CROP STATISTICS.—BOURBON COUNTY.

Table showing acres, product and value of field crops in the county for 1917 and 1918.

Crops.	1917.			1918.		
	Acres.	Product.	Value.	Acres.	Product.	Value.
Winter wheat.....bu.	4,310	86,200	\$174,986.00	22,428	403,704	\$815,482.08
Spring wheat.....bu.						
Corn.....bu.	68,926	1,792,076	1,935,442.08	65,316	457,212	704,106.48
Oats.....bu.	20,252	749,324	442,101.16	30,128	723,072	484,458.24
Rye.....bu.	101	1,818	2,981.52	275	4,125	6,806.25
Barley.....bu.	5	125	126.25	13	260	273.00
Emmer ("speltz").....bu.	20	700	448.00	4	88	63.36
Irish potatoes.....bu.	524	39,300	58,950.00	574	11,480	16,875.60
Sweet potatoes.....bu.				6	228	399.00
Cowpeas.....tons	183	229	3,664.00	44	66	1,089.00
Flax.....bu.	6,519	52,152	140,810.40	4,603	23,015	74,798.75
Broom corn.....lbs.	7	3,325	498.75	40	12,000	1,320.00
Millet.....tons	254	508	5,080.00	225	338	3,718.00
Sugar beets.....tons						
Sorghum for syrup.....gals.	1,777	159,930	111,951.00	894	53,640	59,004.00
for seed.....bu.	114	2,508	4,514.40	448	4,928	8,870.40
for hay.....tons	2,597	9,090	81,810.00	2,204	7,714	57,855.00
Milo for grain.....bu.	143	2,288	2,745.60	617	6,170	9,563.50
for stover*.....tons		429	1,716.00		1,851	9,255.00
for hay.....tons				121	393	2,554.50
Kafir for grain.....bu.	9,798	176,364	238,091.40	7,684	61,472	95,281.60
for stover*.....tons		31,843	159,215.00		17,289	86,445.00
for hay.....tons	516	1,548	9,288.00	393	1,081	7,026.50
Feterita for grain.....bu.	197	2,364	3,073.20	185	2,220	3,441.00
for stover*.....tons		493	1,972.00		555	2,775.00
for hay.....tons	148	444	2,220.00	32	128	896.00
Sudan grass.....tons	79	237	1,896.00	47	141	1,410.00
Jerusalem corn.....tons	4	12	72.00	7	19	123.50
Alfalfa.....tons	3,983	11,949	250,929.00	6,578	18,090	416,070.00
Timothy.....tons	17,943			15,768		
Clover.....tons	1,716			2,045		
Blue grass.....tons	2,169	† 23,234	371,744.00	1,874	‡ 16,770	368,940.00
Sweet clover.....tons	76			590		
Orchard grass.....tons	26			24		
Other tame grasses.....tons	23			172		
Prairie hay.....tons	23,801	17,850	285,600.00	23,419	11,710	210,780.00
Totals.....	166,211		\$4,291,925.76	186,758		\$3,449,680.76

Corn on hand March 1, 1917, 66,364 bushels; March 1, 1918, 397,439 bushels.

Wheat on hand March 1, 1917, 550 bushels; March 1, 1918, 14,216 bushels.

Prairie grass for pasture March 1, 1918: Acres fenced, 68,772.

* Forage after harvesting grain. † Product of 1916. ‡ Product of 1917.

SUMMARY.—BOURBON COUNTY.

Showing quantity and value of farm products in the county for 1917 and 1918.

Products.	1917.		1918.	
	Quantity.	Value.	Quantity.	Value.
Field crops.....acres	166,211	\$4,291,925.76	186,758	\$3,449,680.76
Animals slaughtered or sold for slaughter.....		661,068.00		887,522.00
Poultry and eggs sold.....		177,720.00		189,725.00
Wool clip.....lbs.	3,669	1,027.32	5,175	2,794.50
Cheese.....lbs.	370	62.90		
Butter.....lbs.	371,203	115,514.19	482,908	197,076.66
Condensed milk.....lbs.				
Milk sold.....		128,021.00		227,339.00
Honey and beeswax.....lbs.	12,940	2,332.70	2,101	525.25
Wood marketed.....		190.00		278.00
Totals.....		\$5,377,861.87		\$4,954,941.17

Number of cream separators March 1, 1917, 942; March 1, 1918, 1,124.

Number of silos March 1, 1917, 105; March 1, 1918, 134.

Number of tractors March 1, 1917, 8; March 1, 1918, 12.

BROWN COUNTY.

Organized in 1855; area, 364,662 acres; population, 20,933; rank in population, 25; assessed valuation, \$50,789,244; miles of railroad, main track, 97.32; county seat, Hiawatha; population, 3,052.

POPULATION AND VALUATION.—BROWN COUNTY.

Table showing total population, by townships and cities, for 1917 and 1918, and the assessed valuation of the municipal townships and cities of 1918.

Townships (and cities).	Population.		Assessed valuation of property, 1918.				
	1917.	1918.	Land.	City lots.	Personal.	Railroad, etc.	Total.
The county	20,069	20,933	\$28,621,457	\$4,763,295	\$13,242,565	\$4,161,927	\$50,789,244
Hamlin	207	220		\$86,350	\$106,055	\$17,151	\$209,556
Hamlin tp.	752	742	\$2,312,399		688,435	222,100	3,222,934
Hiawatha	2,860	3,052		2,104,415	1,601,080	119,220	3,824,715
Hiawatha tp.	1,471	1,499	3,921,588		1,109,695	673,732	5,705,015
Irving tp.	852	935	2,401,055		782,335	7,269	3,190,659
Baker		115					
Horton	3,644	4,046		1,603,280	728,000	29,342	2,360,622
Willis	201	214		51,550	70,180	16,463	138,193
Mission tp.	2,182	2,037	4,622,308	30,540	1,320,190	1,311,209	7,284,247
Morrill	415	502		277,830	528,980	25,099	831,909
Morrill tp.	899	921	2,252,189		714,945	220,320	3,187,454
Reserve	145	139		64,690	122,320	13,673	200,683
Padonia tp.	780	787	2,061,968	6,570	592,425	215,465	2,876,428
Powhattan	257	283		114,750	127,765	18,973	261,488
Powhattan tp.	1,288	1,377	2,881,502		1,091,515	180,351	4,153,368
Robinson	473	476		157,335	227,755	12,167	397,257
Robinson tp.	961	850	2,309,583		708,020	228,858	3,246,461
Fairview	389	306		141,290	259,400	31,280	431,970
Walnut tp.	1,146	1,288	3,321,881		1,351,080	258,787	4,931,748
Everest	179	389		124,695	353,605	36,462	514,762
Washington tp.	768	755	2,536,984		758,785	524,006	3,819,775

* Not reported separately from township in 1917.

LIVESTOCK.—BROWN COUNTY.

Table showing number, value and mortality of livestock in the county for 1917 and 1918.

Livestock.	1917.		1918.		Mortality.	
	Number.	Value.	Number.	Value.	1917.	1918.
Horses	11,724	\$1,406,880.00	11,493	\$1,275,723.00	214	244
Mules and asses	3,500	472,500.00	3,516	492,240.00	16	30
Milk cows	7,735	580,125.00	9,865	808,930.00	202	435
Other cattle	21,994	1,099,700.00	19,460	1,050,840.00	465	780
Sheep	5,944	65,384.00	6,175	77,187.50	102	313
Swine	30,796	631,318.00	35,057	788,782.50	1,995	2,386
Totals	81,693	\$4,255,907.00	85,566	\$4,493,703.00	2,994	4,188

Number of dogs in county March 1, 1917, 1,595; March 1, 1918, 2,068.

Number of sheep killed by dogs, year ending March 1, 1917, 15; March 1, 1918, 37.

Number of sheep killed by wolves, year ending March 1, 1917, 2; March 1, 1918, 7.

Mortality of swine from cholera, year ending March 1, 1917, 1,612; March 1, 1918, 1,885.

FARM AND CROP STATISTICS.—BROWN COUNTY.

Table showing acres, product and value of field crops in the county for 1917 and 1918.

Crops.	1917.			1918.		
	Acres.	Product.	Value.	Acres.	Product.	Value.
Winter wheat.....bu.	16,507	297,126	\$594,252.00	57,989	1,101,791	\$2,258,671.55
Spring wheat.....bu.				20	360	730.80
Corn.....bu.	124,430	3,359,610	4,065,128.10	92,883	1,950,543	2,691,749.34
Oats.....bu.	42,253	2,112,650	1,246,463.50	31,368	972,408	641,789.28
Rye.....bu.	227	4,086	6,741.90	598	10,764	17,007.12
Barley.....bu.	873	26,190	26,190.00	230	6,900	7,245.00
Emmer ("speltz").....bu.						
Irish potatoes.....bu.	1,063	77,599	112,518.55	993	39,720	58,785.60
Sweet potatoes.....bu.						
Cowpeas.....tons						
Flax.....bu.						
Broom corn.....lbs.	2	500	70.00			
Millet.....tons	37	74	740.00	18	36	396.00
Sugar beets.....tons						
Sorghum for syrup.....gals.	6	420	294.00	29	1,885	2,073.50
for seed.....bu.	2	16	24.00	12	180	333.00
for hay.....tons	68	170	1,360.00	106	318	2,862.00
Milo for grain.....bu.						
for stover*.....tons						
for hay.....tons	1	3	21.00			
Kafir for grain.....bu.	390	1,170	1,755.00	83	2,075	3,320.00
for stover*.....tons		975	3,900.00		332	2,656.00
for hay.....tons	98	392	3,136.00	8	32	320.00
Peterita for grain.....bu.				1	15	23.25
for stover*.....tons					3	18.00
for hay.....tons	2	6	42.00		4	32.00
Sudan grass.....tons				15	38	418.00
Jerusalem corn.....tons	5	20	160.00			
Alfalfa.....tons	13,067	39,201	784,020.00	13,819	27,638	690,950.00
Timothy.....tons	11,456			10,697		
Clover.....tons	10,547			10,687		
Blue grass.....tons	35,359	† 40,630	609,450.00	38,069	‡ 20,825	478,975.00
Sweet clover.....2				274		
Orchard grass.....tons	369			2		
Other tame grasses.....tons	8,003			5,540		
Prairie hay.....tons	6,511	6,511	97,665.00	1,309	1,309	23,562.00
Totals.....	271,278		\$7,553,931.05	264,751		\$6,881,917.44

Corn on hand March 1, 1917, 639,862 bushels; March 1, 1918, 1,335,839 bushels.

Wheat on hand March 1, 1917, 39,985 bushels; March 1, 1918, 31,054 bushels.

Prairie grass for pasture March 1, 1918: Acres fenced, 9,905; acres not fenced, 35.

* Forage after harvesting grain. † Product of 1916. ‡ Product of 1917.

SUMMARY.—BROWN COUNTY.

Showing quantity and value of farm products in the county for 1917 and 1918.

Products.	1917.		1918.	
	Quantity.	Value.	Quantity.	Value.
Field crops.....acres	271,278	\$7,553,931.05	264,751	\$6,881,917.44
Animals slaughtered or sold for slaughter.....		1,612,711.00		2,401,943.00
Poultry and eggs sold.....		208,878.00		197,876.00
Wool clip.....lbs.	10,660	2,984.80	31,064	16,774.56
Cheese.....lbs.				
Butter.....lbs.	282,009	85,020.12	233,780	91,364.61
Condensed milk.....lbs.				
Milk sold.....		158,575.00		197,781.00
Honey and beeswax.....lbs.	21,866	3,942.18	8,721	2,187.85
Wood marketed.....		1,637.00		2,530.00
Totals.....		\$9,627,679.15		\$9,792,374.46

Number of cream separators March 1, 1917, 961; March 1, 1918, 1,107.

Number of silos March 1, 1917, 76; March 1, 1918, 83.

Number of tractors March 1, 1917, 35; March 1, 1918, 35.

BUTLER COUNTY.

Organized in 1855; area, 921,424 acres; population, 46,659; rank in population, 6; assessed valuation, \$118,394,336; miles of railroad, main track, 177.15; county seat, Eldorado; population, 16,246.

POPULATION AND VALUATION.—BUTLER COUNTY.

Table showing total population, by townships and cities, for 1917 and 1918, and the assessed valuation of the municipal townships and cities of 1918.

Townships (and cities).	Population.		Assessed valuation of property, 1918.				
	1917.	1918.	Land.	City lots.	Personal.	Railroad, etc.	Total.
The county.....	30,915	46,659	\$33,486,854	\$6,974,083	\$63,157,520	\$14,775,879	\$118,394,336
Augusta.....	4,755	5,550		\$1,445,890	\$2,207,930	\$137,472	\$3,791,292
Augusta tp.....	1,317	1,277	\$1,384,106		6,890,470	1,208,160	9,482,736
Benton.....	216	240		88,965	98,730	26,632	214,327
Benton tp.....	516	512	1,191,697		248,325	273,207	1,713,229
Bloomington tp.....	422	370	824,774		242,195	370,244	1,437,213
Bruno tp.....	663	580	1,102,083	11,535	1,723,200	323,386	3,148,669
Chelsea tp.....	418	426	2,127,777		361,435	23,239	2,523,986
Clay tp.....	246	377	639,436		237,870	91,018	968,324
Clifford tp.....	530	572	1,268,299		353,290	1,152	1,622,741
Douglass.....	754	949		441,435	426,155	64,563	932,153
Douglass tp.....	481	538	1,211,185		641,330	554,008	2,412,233
El. orado.....	7,154	16,246		4,039,362	4,648,265	268,143	8,955,770
El'orado tp.....	1,149	3,222	1,372,741	5,710	13,603,675	2,363,363	17,539,779
Fairmount tp.....	677	638	1,283,781	22,430	592,285	319,118	2,217,614
Fairview tp.....	355	513	894,199		1,976,240	138,061	3,008,500
Glencoe tp.....	637	640	921,083	36,598	384,275	467,127	1,809,083
Hickory tp.....	365	360	932,552		237,515	855,043	2,025,110
Lincoln tp.....	527	590	1,779,662	4,160	1,121,550	933,079	3,838,451
Leon.....	438	447		124,375	123,565	26,925	274,865
Little Walnut tp.....	329	324	752,902		212,540	328,862	1,294,304
Logan tp.....	247	243	599,136		191,485	392,743	1,183,364
White Water.....	509	495		234,255	514,770	66,326	815,351
Milton tp.....	627	619	1,357,341	7,655	722,605	299,262	2,386,863
Murdock tp.....	446	404	1,345,425		268,735	2,970	1,617,130
Pleasant tp.....	550	530	1,022,216		225,980	429,813	1,678,009
Potwin.....	279	356		145,155	191,810	18,529	355,494
Plum Grove tp.....	479	474	1,155,637	6,330	400,600	143,868	1,706,435
Prospect tp.....	623	609	1,434,109	3,838	1,537,900	556,785	3,532,632
Richland tp.....	685	698	1,087,097	23,635	388,305	175,671	1,674,708
Rock Creek tp.....	379	411	734,732		384,085	35,419	1,154,236
Rosalie tp.....	539	553	1,024,583	27,495	311,100	574,082	1,937,260
Spring tp.....	535	661	861,294		686,170	538,053	2,085,517
Sycamore tp.....	547	550	2,082,680	41,355	363,395	24,069	2,511,499
Towanda.....	345	1,147		197,480	324,670	16,877	539,027
Towanda tp.....	441	2,300	977,904		13,462,395	917,608	15,357,907
Lantham.....	256	272		66,425	119,805	14,516	200,746
Union tp.....	324	319	865,372		145,125	200,295	1,210,792
Walnut tp.....	1,155	1,642	1,053,051		6,587,745	1,596,191	9,236,987

LIVESTOCK.—BUTLER COUNTY.

Table showing number, value and mortality of livestock in the county for 1917 and 1918.

Livestock.	1917.		1918.		Mortality.	
	Number.	Value.	Number.	Value.	1917.	1918.
Horses.....	17,360	\$2,083,200.00	17,683	\$1,962,813.00	310	368
Mules and asses.....	4,984	672,840.00	3,779	529,060.00	27	27
Milk cows.....	9,209	690,675.00	10,988	901,016.00	223	254
Other cattle.....	48,080	2,404,000.00	44,961	2,427,894.00	592	870
Sheep.....	3,296	36,256.00	3,635	45,437.50	122	178
Swine.....	28,510	584,455.00	26,316	592,110.00	2,863	2,083
Totals.....	111,439	\$6,471,426.00	107,362	\$6,458,330.50	4,137	3,780

Number of dogs in county March 1, 1917, 1,347; March 1, 1918, 2,210.

Number of sheep killed by dogs, year ending March 1, 1917, 22; March 1, 1918, 7.

Number of sheep killed by wolves, year ending March 1, 1918, 4.

Mortality of swine from cholera, year ending March 1, 1917, 2,644; March 1, 1918, 1,503.

FARM AND CROP STATISTICS.—BUTLER COUNTY.

Table showing acres, product and value of field crops in the county for 1917 and 1918.

Crops.	1917.			1918.		
	Acres.	Product.	Value.	Acres.	Product.	Value.
Winter wheat.....bu.	9,195	128,730	\$257,460.00	29,827	536,886	\$1,073,772.00
Spring wheat.....bu.				36	648	1,289.52
Corn.....bu.	104,477	1,253,724	1,517,006.04	80,520	644,160	966,240.00
Oats.....bu.	38,815	1,009,190	645,881.60	53,311	1,386,086	970,260.20
Rye.....bu.	1,764	28,224	47,980.80	3,565	57,040	90,693.60
Barley.....bu.	5	125	125.00	59	1,357	1,451.99
Emmer ("speltz").....bu.	50	1,200	828.00	42	1,050	787.50
Irish potatoes.....bu.	997	48,853	78,164.80	1,018	26,468	39,702.00
Sweet potatoes.....bu.	5	200	350.00	27	1,620	2,916.00
Cowpeas.....tons	3	4	64.00	40	60	990.00
Flax.....bu.	702	4,212	11,372.40	193	772	2,509.00
Broom corn.....lbs.	85	34,000	5,100.00	138	41,400	4,554.00
Millet.....tons	1,057	1,586	17,446.00	554	831	9,972.00
Sugar beets.....tons	1	9	49.50	1	6	57.00
Sorghum for syrup.....gals.	384	23,040	16,128.00	322	12,880	14,168.00
for seed.....bu.	2,358	42,444	70,457.04	4,700	47,000	89,300.00
for hay.....tons	3,228	8,877	62,139.00	4,026	13,085	85,052.50
Milo for grain.....bu.	273	3,276	4,914.00	1,106	14,378	23,004.80
for stover*.....tons		546	2,730.00		3,318	13,272.00
for hay.....tons	70	140	980.00	37	120	720.00
Kafir for grain.....bu.	67,207	537,656	806,484.00	59,360	652,960	1,038,206.40
for stover*.....tons		168,017	924,093.50		192,920	964,600.00
for hay.....tons	1,211	2,725	19,075.00	126	473	3,074.50
Feterita for grain.....bu.	853	10,236	15,354.00	1,504	18,048	27,974.40
for stover*.....tons		1,706	8,530.00		4,136	18,612.00
for hay.....tons	223	557	4,456.00	574	1,722	11,193.00
Sudan grass.....tons	228	456	4,104.00	576	2,016	20,160.00
Jerusalem corn.....tons	23	52	364.00	8	30	195.00
Alfalfa.....tons	40,582	121,746	2,191,428.00	43,820	120,505	2,289,595.00
Timothy.....tons	5					
Clover tons.....tons	10				92	
Blue grass.....tons	709				517	
Sweet clover.....tons	3,997	† 4,000	60,000.00		2,546	‡ 3,400
Orchard grass.....tons	20				103	
Other tame grasses.....tons	190				102	
Prairie hay.....tons	25,031	25,031	325,403.00	25,597	12,799	204,784.00
Totals.....	303,758		\$7,098,467.68	314,447		\$8,033,706.41

Corn on hand March 1, 1917, 130,046 bushels; March 1, 1918, 159,613 bushels.

Wheat on hand March 1, 1917, 7,979 bushels; March 1, 1918, 11,573 bushels.

Prairie grass for pasture March 1, 1918: Acres fenced, 261,871; acres not fenced, 4,220.

* Forage after harvesting grain. † Product of 1916. ‡ Product of 1917.

SUMMARY.—BUTLER COUNTY.

Showing quantity and value of farm products in the county for 1917 and 1918.

Products.	1917.		1918.	
	Quantity.	Value.	Quantity.	Value.
Field crops.....acres	303,758	\$7,098,467.68	314,447	\$8,033,706.41
Animals slaughtered or sold for slaughter.....		3,218,416.00		3,694,985.00
Poultry and eggs sold.....		245,602.00		249,674.00
Wool clip.....lbs.	8,378	2,345.84	7,427	4,010.58
Cheese.....lbs.	100	17.00		
Butter.....lbs.	328,174	98,452.20	282,124	110,028.36
Condensed milk.....lbs.				
Milk sold.....		212,085.00		318,201.00
Honey and beeswax.....lbs.	44,453	8,079.24	25,206	6,350.00
Wood marketed.....		676.00		1,508.00
Totals.....		\$10,884,140.96		\$12,318,463.35

Number of cream separators March 1, 1917, 1,014; March 1, 1918, 1,132.

Number of silos March 1, 1917, 261; March 1, 1918, 267.

Number of tractors March 1, 1917, 86; March 1, 1918, 44.

CHASE COUNTY.

Organized in 1859; area, 496,262 acres; population, 6,641; rank in population, 78; assessed valuation, \$26,304,737; miles of railroad, main track, 52.53; county seat, Cottonwood Falls; population, 846.

POPULATION AND VALUATION.—CHASE COUNTY.

Table showing total population, by townships and cities, for 1917 and 1918, and the assessed valuation of the municipal townships and cities of 1918.

Townships (and cities).	Population.		Assessed valuation of property, 1918.				
	1917.	1918.	Land.	City lots.	Personal.	Railroad, etc.	Total.
The county.....	6,651	6,641	\$16,666,280	\$1,118,220	\$4,976,320	\$3,543,917	\$26,304,737
Bazaar tp.....	474	483	\$2,156,840	.....	\$470,610	\$133,418	\$2,760,868
Cedar tp.....	522	518	1,167,410	\$3,000	376,100	2,426	1,548,936
Cedar Point.....	161	138	.....	71,740	63,130	2,587	137,457
Cottonwood tp....	636	622	2,126,250	47,140	477,150	888,822	3,539,362
Elmdale.....	282	175	.....	92,510	166,570	54,231	313,311
Diamond Creek tp.	741	773	3,188,470	.....	641,560	848,091	4,678,121
Cottonwood Falls,	882	846	.....	549,870	584,840	49,615	1,184,325
Falls tp.....	381	339	1,497,030	.....	351,900	562,626	2,411,556
Homestead tp....	307	318	989,820	.....	217,220	67	1,207,107
Matfield tp.....	409	436	2,166,450	39,800	450,070	21,327	2,677,647
Strong City.....	695	818	.....	265,120	128,240	86,875	480,235
Strong tp.....	248	277	1,388,720	.....	268,730	366,291	2,023,741
Toledo tp.....	913	898	1,985,290	49,040	780,200	527,541	3,342,071

LIVESTOCK.—CHASE COUNTY.

Table showing number, value and mortality of livestock in the county for 1917 and 1918.

Livestock.	1917.		1918.		Mortality.	
	Number.	Value.	Number.	Value.	1917.	1918.
Horses.....	5,677	\$681,240.00	5,747	\$637,917.00	41	83
Mules and asses.....	1,373	185,355.00	1,067	149,380.00	6	2
Milk cows.....	2,023	151,725.00	2,492	204,344.00	12	30
Other cattle.....	25,155	1,257,750.00	29,187	1,576,098.00	163	267
Sheep.....	415	4,565.00	760	9,500.00	.....	24
Swine.....	9,021	184,930.50	10,183	229,117.50	253	555
Totals.....	43,664	\$2,465,565.50	49,436	\$2,806,356.50	475	961

Number of dogs in county March 1, 1917, 663; March 1, 1918, 719.

Number of sheep killed by wolves, year ending March 1, 1917, 5; March 1, 1918, 35.

Mortality of swine from cholera, year ending March 1, 1917, 131; March 1, 1918, 364.

FARM AND CROP STATISTICS.—CHASE COUNTY.

Table showing acres, product and value of field crops in the county for 1917 and 1918.

Crops.	1917.			1918.		
	Acres.	Product.	Value.	Acres.	Product.	Value.
Winter wheat.....bu.	3,820	110,780	\$239,284.80	9,343	270,947	\$552,731.88
Spring wheat.....bu.						
Corn.....bu.	37,135	779,835	857,818.50	27,352	164,112	251,091.36
Oats.....bu.	3,947	122,357	79,532.05	5,524	171,244	123,295.68
Rye.....bu.	539	9,163	15,118.95	569	10,811	17,297.60
Barley.....bu.	23	690	690.00	42	1,050	1,155.00
Emmer ("speltz").....bu.						
Irish potatoes.....bu.	371	25,599	39,678.45	425	14,875	22,312.50
Sweet potatoes.....bu.	8	320	480.00			
Cowpeas.....tons						
Flax.....bu.	101	656	1,771.20			
Broom corn.....lbs						
Millet.....tons	106	186	1,581.00	137	206	2,266.00
Sugar beets.....tons						
Sorghum for syrup.....gals.	40	2,400	1,680.00	44	2,200	2,420.00
for seed.....bu.	465	8,835	13,252.50	947	11,364	19,887.00
for hay.....tons	1,583	5,541	27,705.00	2,095	5,761	40,327.00
Milo for grain.....bu.	161	2,415	3,139.50	400	4,800	7,680.00
for stover*.....tons		563	1,689.00		600	2,400.00
for hay.....tons						
Kafir for grain.....bu.	12,761	165,893	220,637.69	9,717	68,019	105,429.45
for stover*.....tons		51,044	178,654.00		19,434	97,170.00
for hay.....tons	67	268	1,474.00	397	893	5,358.00
Feterita for grain.....bu.	221	3,536	4,420.00	404	4,040	6,060.00
for stover*.....tons		608	2,432.00		1,010	5,050.00
for hay.....tons	130	455	2,502.50	90	270	1,890.00
Sudan grass.....tons	29	131	1,043.00	61	183	1,830.00
Jerusalem corn.....tons						
Alfalfa.....tons	21,029	63,087	1,135,566.00	21,870	65,610	1,377,810.00
Timothy.....tons						
Clover.....tons						
Blue grass.....tons	290	† 488	7,320.00	188	‡ 242	4,840.00
Sweet clover.....tons	317			186		
Orchard grass.....tons	16			3		
Other tame grasses.....tons	20			4		
Prairie hay.....tons	6,727	6,727	94,178.00	5,910	4,433	70,928.00
Totals.....	89,906		\$2,931,653.14	85,736		\$2,719,229.47

Corn on hand March 1, 1917, 25,090 bushels; March 1, 1918, 136,741 bushels.

Wheat on hand March 1, 1917, 4,475 bushels; March 1, 1918, 7,080 bushels.

Prairie grass for pasture March 1, 1918: Acres fenced, 177,326; acres not fenced, 80.

* Forage after harvesting grain. † Product of 1916. ‡ Product of 1917.

SUMMARY.—CHASE COUNTY.

Showing quantity and value of farm products in the county for 1917 and 1918.

Products.	1917.		1918.	
	Quantity.	Value.	Quantity.	Value.
Field crops.....acres	89,906	\$2,931,653.14	85,736	\$2,719,229.47
Animals slaughtered or sold for slaughter.....		1,968,153.00		2,432,558.00
Poultry and eggs sold.....		81,065.00		77,359.00
Wool clip.....lbs.	1,448	405.44	2,060	1,112.40
Cheese.....lbs.				
Butter.....lbs.	112,462	33,738.60	83,370	32,514.30
Condensed milk.....lbs.				
Milk sold.....		36,105.00		48,906.00
Honey and beeswax.....lbs.	8,141	1,567.78	11,827	2,982.55
Wood marketed.....		687.00		108.00
Totals.....		\$5,053,374.96		\$5,314,769.72

Number of cream separators, March 1, 1917, 378; March 1, 1918, 398.

Number of silos March 1, 1917, 160; March 1, 1918, 124.

Number of tractors March 1, 1917, 11; March 1, 1918, 13.

CHAUTAUQUA COUNTY.

Organized in 1875; area, 412,866 acres; population, 10,800; rank in population, 64; assessed valuation, \$20,163,926; miles of railroad, main track, 93.98; county seat, Sedan; population, 1,626.

POPULATION AND VALUATION.—CHAUTAUQUA COUNTY.

Table showing total population, by townships and cities, for 1917 and 1918, and the assessed valuation of the municipal townships and cities of 1918.

Townships (and cities).	Population.		Assessed valuation of property, 1918.						
	1917.	1918.	Land.	City lots.	Personal.	Railroad, etc.	Total.		
The county.....	11,306	10,800	\$7,154,675	\$1,493,905	\$7,482,715	\$4,032,631	\$20,163,926		
Chautauqua.....	217	507	.....	\$76,435	\$123,975	\$4,000	\$204,410	
Peru.....	528	1,637	445	1,702	100,065	151,325	9,000	260,390	
Belleville tp.....	892	750	.....	\$599,315	905	1,557,540	758,404	2,916,164
Caneyville tp.....	756	627	759,190	1,595	315,610	51,519	1,127,914		
Center tp.....	441	417	650,765	.....	295,215	122,441	1,068,421	
Harrison tp.....	721	672	834,260	46,035	500,730	536,147	1,917,172		
Hendricks tp.....	906	968	467,320	101,945	799,155	467,307	1,835,727		
Cedarvale.....	788	1,437	865	1,516	369,860	432,930	34,963	837,753	
Jefferson tp.....	649	651	861,025	2,920	308,260	36,469	1,208,674		
Lafayette tp.....	354	302	522,155	.....	235,395	17,711	775,261	
Niotaze.....	319	325	895	.....	221,955	62,755	47,689	332,399
Little Caney tp.....	607	926	570	895	509,160	228,495	474,801	1,212,456	
Salt Creek tp.....	671	491	416,935	2,205	229,705	316,165	965,010		
Sedan.....	1,500	1,626	.....	561,670	601,765	46,950	1,210,385	
Sedan tp.....	605	2,105	625	2,251	520,185	2,130	1,117,280	425,072	2,064,667
Summit tp.....	531	511	603,480	5,825	327,605	371,022	1,307,932		
Washington tp....	821	448	410,885	360	194,975	312,971	919,191		

LIVESTOCK.—CHAUTAUQUA COUNTY.

Table showing number, value and mortality of livestock in the county for 1917 and 1918.

Livestock.	1917.		1918.		Mortality.	
	Number.	Value.	Number.	Value.	1917.	1918.
Horses.....	10,143	\$1,217,160.00	7,397	\$821,067.00	156	148
Mules and asses.....	2,984	402,840.00	1,635	228,900.00	13	10
Milk cows.....	4,637	347,775.00	5,388	441,816.00	113	89
Other cattle.....	24,707	1,235,350.00	21,735	1,173,690.00	254	420
Sheep.....	288	3,168.00	539	6,737.50	.....	.....
Swine.....	6,579	134,869.50	7,472	168,120.00	996	301
Totals.....	49,338	\$3,341,162.50	44,166	\$2,840,330.50	1,532	968

Number of dogs in county March 1, 1917, 832; March 1, 1918, 1,192.

Number of sheep killed by dogs, year ending March 1, 1917, 1.

Number of sheep killed by wolves, year ending March 1, 1917, 1; March 1, 1918, 2.

Mortality of swine from cholera, year ending March 1, 1917, 789; March 1, 1918, 97.

FARM AND CROP STATISTICS.—CHAUTAUQUA COUNTY.

Table showing acres, product and value of field crops in the county for 1917 and 1918.

Crops.	1917.			1918.		
	Acres.	Product.	Value.	Acres.	Product.	Value.
Winter wheat.....bu.	3,900	66,300	\$134,589.00	12,963	246,297	\$492,594.00
Spring wheat.....bu.	1	16	31.52			
Corn.....bu.	31,161	218,127	266,114.94	17,278	51,834	79,824.36
Oats.....bu.	4,075	122,250	75,795.00	9,850	325,050	243,787.50
Rye.....bu.	113	1,808	3,091.68	452	8,136	13,424.40
Barley.....bu.				45	900	945.00
Emmer ("speltz").....bu.						
Irish potatoes.....bu.	344	13,760	20,640.00	354	8,142	12,213.00
Sweet potatoes.....bu.	16	1,280	2,137.60	16	800	1,504.00
Cowpeas.....tons	5	6	96.00	37	56	924.00
Flax.....bu.	283	1,981	5,348.70	352	1,408	4,376.00
Broom corn.....lbs.	50	22,500	3,375.00	22	6,600	660.00
Millet.....tons	278	765	8,415.00	279	419	4,609.00
Sugar beets.....tons				5	30	285.00
Sorghum for syrup.....gals.	55	3,850	2,695.00	210	7,350	8,085.00
for seed.....bu.	3,183	28,647	50,132.25	5,243	47,187	84,936.60
for hay.....tons	2,184	7,098	35,490.00	2,114	7,928	55,496.00
Milo for grain.....bu.	211	2,532	3,165.00	435	3,915	6,068.25
for stover*.....tons		422	1,266.00		870	3,480.00
for hay.....tons	50	150	825.00	103	232	1,392.00
Kafir for grain.....bu.	16,310	195,720	274,008.00	21,122	126,732	196,434.60
for stover*.....tons		36,697	146,788.00		58,086	290,430.00
for hay.....tons	607	1,821	10,926.00	248	868	5,642.00
Feterita for grain.....bu.	374	3,366	5,049.00	187	1,683	2,524.50
for stover*.....tons		561	1,683.00		327	1,308.00
for hay.....tons	144	432	2,160.00	227	511	3,066.00
Sudan grass.....tons	74	222	1,998.00	177	575	5,750.00
Jerusalem corn.....tons	16	48	288.00	5	18	117.00
Alfalfa.....tons	11,479	35,585	711,700.00	13,012	29,277	614,817.00
Timothy.....tons	4			8		
Clover.....tons	9			18		
Blue grass.....tons	44			88		
Sweet clover.....tons	256	† 250	3,750.00	728	‡ 1,206	24,120.00
Orchard grass.....tons				11		
Other tame grasses.....tons				361		
Prairie hay.....tons	22,339	22,339	312,746.00	14,523	7,262	116,192.00
Totals.....	97,565		\$2,084,303.69	100,473		\$2,275,205.21

Corn on hand March 1, 1917, 24,938 bushels; March 1, 1918, 10,785 bushels.

Wheat on hand March 1, 1917, 515 bushels; March 1, 1918, 2,453 bushels.

Prairie grass for pasture March 1, 1918: Acres fenced, 150,719; acres not fenced, 130.

* Forage after harvesting grain. † Product of 1916. ‡ Product of 1917.

SUMMARY.—CHAUTAUQUA COUNTY.

Showing quantity and value of farm products in the county for 1917 and 1918.

Products.	1917.		1918.	
	Quantity.	Value.	Quantity.	Value.
Field crops.....acres	97,565	\$2,084,303.69	100,473	\$2,275,205.21
Animals slaughtered or sold for slaughter.....		638,151.00		883,806.00
Poultry and eggs sold.....		65,231.00		75,900.00
Wool clip.....lbs.	512	143.36	898	484.92
Cheese.....lbs.	360	61.20	240	43.20
Butter.....lbs.	104,592	31,377.60	125,869	49,088.91
Condensed milk.....lbs.				
Milk sold.....		49,205.00		65,773.00
Honey and beeswax.....lbs.	15,278	2,758.54	4,809	1,204.25
Wood marketed.....		378.00		1,293.00
Totals.....		\$2,871,609.39		\$3,352,798.49

Number of cream separators March 1, 1917, 483; March 1, 1918, 541.

Number of silos, March 1, 1917, 73; March 1, 1918, 62.

Number of tractors, March 1, 1917, 19; March 1, 1918, 14.

CHEROKEE COUNTY.

Organized in 1866; area, 372,921 acres; population, 34,228; rank in population, 10; assessed valuation, \$34,133,142; miles of railroad, main track, 130.18; county seat, Columbus; population, 3,809.

POPULATION AND VALUATION.—CHEROKEE COUNTY.

Table showing total population, by townships and cities, for 1917 and 1918, and the assessed valuation of the municipal townships and cities of 1918.

Townships (and cities).	Population.		Assessed valuation of property, 1918.				
	1917.	1918.	Land.	City lots.	Personal.	Railroad, etc.	Total.
The county.....	34,079	34,228	\$13,904,644	\$5,387,595	\$8,358,202	\$6,482,701	\$34,133,142
Scammon.....	1,891	1,892		\$242,810	\$215,474	\$72,214	\$530,498
Cherokee tp.....	1,212	1,268	\$476,545	5,410	128,553	304,865	915,373
Crawford tp.....	616	765	706,990		217,466	665,204	1,589,660
Garden tp.....	902	1,115	1,864,395	32,590	89,617	277,029	2,263,631
Lola tp.....	992	890	847,280	37,420	343,806	593,631	1,822,137
Galena.....	6,382	5,120		1,063,625	1,186,297	281,675	2,531,597
Lowell tp.....	776	679	317,295		80,253	340,770	738,318
Lyon tp.....	1,125	2,095	1,123,310	152,355	976,590	29,870	2,255,242
Mineral.....	1,057	915		206,885	76,754	8,307	291,946
Weir city.....	2,062	1,990		326,680	125,209	104,169	556,058
Mineral tp.....	961	768	849,655	11,135	191,687	613,988	1,666,465
Neosho tp.....	1,091	1,136	978,315	22,245	361,288	231,602	1,593,450
Pleasant View tp..	1,122	1,322	1,100,340	21,885	491,262	155,873	1,769,360
Ross tp.....	4,254	3,722	1,267,730	79,395	506,887	881,887	2,735,077
Columbus.....	2,932	3,309		1,327,745	809,925	153,937	2,291,607
Salamanca tp.....	922	924	766,135	13,600	210,228	593,159	1,583,122
Shawnee tp.....	908	960	777,755	16,275	193,469	337,322	1,324,821
Sheridan tp.....	1,281	1,327	1,349,700	5,755	527,662	246,304	2,129,421
Baxter Springs.....	2,379	2,639		1,765,770	898,452	135,172	2,799,394
Spring Valley tp..	1,214	1,392	1,479,199	56,015	727,323	483,428	2,745,965

LIVESTOCK.—CHEROKEE COUNTY.

Table showing number, value and mortality of livestock in the county for 1917 and 1918.

Livestock.	1917.		1918.		Mortality.	
	Number.	Value.	Number.	Value.	1917.	1918.
Horses.....	10,569	\$1,268,280.00	10,897	\$1,209,567.00	743	353
Mules and asses.....	3,257	439,695.00	2,939	411,460.00	141	23
Milk cows.....	7,638	572,850.00	8,202	672,564.00	258	238
Other cattle.....	10,448	522,400.00	11,991	647,514.00	462	472
Sheep.....	1,716	18,876.00	1,677	20,962.50	303	113
Swine.....	10,982	225,131.00	9,354	210,465.00	409	396
Totals.....	44,610	\$3,047,232.00	45,060	\$3,172,532.50	2,316	1,595

Number of dogs in county March 1, 1917, 1,472; March 1, 1918, 1,679.

Number of sheep killed by dogs, year ending March 1, 1917, 93; March 1, 1918, 26.

Number of sheep killed by wolves, year ending March 1, 1918, 9.

Mortality of swine from cholera, year ending March 1, 1917, 152; March 1, 1918, 133.

FARM AND CROP STATISTICS.—CHEROKEE COUNTY.

Table showing acres, product and value of field crops in the county for 1917 and 1918.

Crops.	1917.			1918.		
	Acres.	Product.	Value.	Acres.	Product.	Value.
Winter wheat.....bu.	61,687	801,931	\$1,603,862.00	80,054	1,360,918	\$2,749,054.36
Spring wheat.....bu.						
Corn.....bu.	58,823	823,522	889,403.76	44,245	176,980	270,779.40
Oats.....bu.	31,540	1,230,060	725,735.40	37,952	1,100,608	770,425.60
Rye.....bu.	44	660	1,141.80	74	1,110	1,809.30
Barley.....bu.				16	320	336.00
Emmer ("speltz").....bu.				3	81	60.75
Irish potatoes.....bu.	339	22,374	34,679.70	515	14,935	20,909.00
Sweet potatoes.....bu.	67	4,154	5,690.98	110	4,400	7,700.00
Cowpeas.....tons	371	464	7,424.00	237	356	5,874.00
Flax.....bu.	62	496	1,339.20	25	125	406.25
Broom corn.....lbs.	58	27,550	3,857.00	52	15,600	1,560.00
Millet.....tons	165	371	3,710.00	218	327	3,597.00
Sugar beets.....tons				19	114	1,083.00
Sorghum for syrup.....gals.	103	7,725	5,407.50	185	9,250	10,175.00
for seed.....bu.	202	2,828	4,722.76	177	1,947	3,699.30
for hay.....tons	2,382	7,742	54,194.00	1,843	3,686	36,860.00
Milo for grain.....bu.	187	3,740	4,488.00	238	1,904	2,856.00
for stover*.....tons		561	1,683.00		357	1,785.00
for hay.....tons	62	186	1,116.00	6	12	78.00
Kafir for grain.....bu.	4,940	93,860	125,772.40	5,734	51,606	77,409.00
for stover*.....tons		14,820	74,100.00		11,468	57,340.00
for hay.....tons	525	1,838	12,866.00	108	216	1,404.00
Feterita for grain.....bu.	430	5,160	6,708.00	249	2,490	3,735.00
for stover*.....tons		1,290	5,160.00		374	1,496.00
for hay.....tons	219	766	4,596.00	119	268	1,608.00
Sudan grass.....tons	190	475	4,275.00	100	125	1,375.00
Jerusalem corn.....tons	69	241	1,687.00	15	30	195.00
Alfalfa.....tons	297	1,040	18,720.00	460	1,035	25,875.00
Timothy.....tons	2,045			747		
Clover.....tons	191			206		
Blue grass.....tons	1,857	† 2,570	43,690.00	183	‡ 1,500	34,500.00
Sweet clover.....tons	17			67		
Orchard grass.....tons	2			42		
Other tame grasses.....tons	782			1,316		
Prairie hay.....tons	17,480	17,480	244,720.00	16,038	8,019	168,399.00
Totals.....	185,136		\$3,890,749.50	191,353		\$4,262,383.96

Corn on hand March 1, 1917, 8,896 bushels; March 1, 1918, 146,930 bushels.

Wheat on hand March 1, 1917, 5,554 bushels; March 1, 1918, 16,193 bushels.

Prairie grass for pasture March 1, 1918: Acres fenced, 45,859; acres not fenced, 1,545.

* Forage after harvesting grain. † Product of 1916. ‡ Product of 1917.

SUMMARY.—CHEROKEE COUNTY.

Showing quantity and value of farm products in the county for 1917 and 1918.

Products.	1917.		1918.	
	Quantity.	Value.	Quantity.	Value.
Field crops.....acres	185,136	\$3,890,749.50	191,353	\$4,262,383.96
Animals slaughtered or sold for slaughter.....		288,749.00		393,341.00
Poultry and eggs sold.....		116,379.00		124,100.00
Wool clip.....lbs.	5,620	1,573.60	4,306	2,325.24
Cheese.....lbs.			15	2.70
Butter.....lbs.	351,736	105,520.80	296,105	115,480.95
Condensed milk.....lbs.				
Milk sold.....		63,882.00		120,276.00
Honey and beeswax.....lbs.	22,258	4,020.94	3,195	799.75
Wood marketed.....		1,334.00		799.00
Totals.....		\$4,472,208.84		\$5,019,508.60

Number of cream separators March 1, 1917, 1,139; March 1, 1918, 997.

Number of silos March 1, 1917, 89; March 1, 1918, 80.

Number of tractors March 1, 1917, 51; March 1, 1918, 51.

CHEYENNE COUNTY.

Organized in 1886; area, 654,766 acres; population, 4,929; rank in population, 88; assessed valuation, \$10,553,037; miles of railroad, main track, 22.33; county seat, St. Francis; population, 592.

POPULATION AND VALUATION.—CHEYENNE COUNTY.

Table showing total population, by townships and cities, for 1917 and 1918, and the assessed valuation of the municipal townships and cities of 1918.

Townships (and cities).	Population.		Assessed valuation of property, 1918.				
	1917.	1918.	Land.	City lots.	Personal.	Railroad, etc	Total.
The county.....	4,564	4,929	\$6,064,134	\$363,508	\$3,557,465	\$567,930	\$10,553,037
Alexander tp.....	107	116	\$316,185	.....	\$90,540	.....	\$406,725
Beaver tp.....	291	323	627,936	.....	282,725	.....	910,661
Benkleman tp.....	218	219	314,227	.....	146,225	\$618	461,070
Bird City.....	293 431	332 492	.....	\$75,628	282,175	41,962	399,765
Bird City tp.....	138 431	160 492	316,113	.....	162,830	106,947	585,890
Calhoun tp.....	233	264	353,550	.....	188,775	.....	542,325
Cherry Creek tp.....	296	339	344,612	.....	163,680	1,244	509,536
Cleveland Run tp..	242	240	377,957	.....	177,950	860	556,767
Dent tp.....	234	217	486,781	.....	169,975	180	656,936
Eureka tp.....	292	290	351,911	.....	149,510	568	501,989
Evergreen tp.....	155	192	241,744	.....	110,360	.....	352,104
Jaqua tp.....	209	175	236,322	.....	117,010	1,065	354,397
Jefferson tp.....	143	156	356,063	.....	124,945	145,445	626,453
Lawn Ridge tp.....	223	238	477,086	.....	204,375	180	681,641
Nuttyscombe tp.....	223	186	268,145	.....	140,820	2,000	410,965
Orlando tp.....	132	162	211,392	2,930	136,725	148,987	500,034
Porter tp.....	408	481	482,572	.....	241,145	.....	723,717
St. Francis.....	539 727	592 839	.....	284,950	548,510	34,960	868,420
Wano tp.....	188 727	247 839	301,538	.....	119,190	82,914	503,642

LIVESTOCK.—CHEYENNE COUNTY.

Table showing number, value and mortality of livestock in the county for 1917 and 1918.

Livestock.	1917.		1918.		Mortality.	
	Number.	Value.	Number	Value.	1917.	1918.
Horses.....	8,731	\$1,047,720.00	9,575	\$1,062,825.00	116	170
Mules and asses.....	1,364	184,140.00	1,199	167,860.00	20	14
Milk cows.....	3,811	285,825.00	4,541	372,362.00	83	98
Other cattle.....	10,689	534,450.00	11,997	647,838.00	325	284
Sheep.....	66	726.00	950	11,875.00	3	1
Swine.....	6,592	135,136.00	8,315	187,087.50	132	284
Totals.....	31,253	\$2,187,997.00	36,577	\$2,449,847.50	679	851

Number of dogs in county March 1, 1917, 601; March 1, 1918, 658.

Number of sheep killed by dogs, year ending March 1, 1918, 1.

Mortality of swine from cholera, year ending March 1, 1917, 41; March 1, 1918, 106.

FARM AND CROP STATISTICS.—CHEYENNE COUNTY.

Table showing acres, product and value of field crops in the county for 1917 and 1918.

Crops.	1917.			1918.		
	Acres.	Product.	Value.	Acres.	Product.	Value.
Winter wheat.....bu.	60,498	483,984	\$948,608.64	103,023	927,207	\$1,761,693.30
Spring wheat.....bu.	6,510	39,060	74,214.00	8,963	52,848	98,297.28
Corn.....bu.	65,704	985,560	1,113,682.80	52,828	686,764	858,455.00
Oats.....bu.	3,792	56,880	38,678.40	3,317	29,853	22,389.75
Rye.....bu.	582	5,820	10,185.00	1,567	14,103	22,564.80
Barley.....bu.	39,236	392,360	392,360.00	27,770	305,470	281,032.40
Emmer ("speltz").....bu.	65	845	616.85	37	259	207.20
Irish potatoes.....bu.	314	16,642	20,802.50	444	24,864	33,815.04
Sweet potatoes.....bu.	1	50	75.00	5	100	200.00
Cowpeas.....tons						
Flax.....bu.	1	6	16.20			
Broom corn.....lbs.	550	173,250	21,656.25	531	166,734	16,673.40
Millet.....tons	2,071	2,589	22,006.50	2,899	4,349	43,490.00
Sugar beets.....tons						
Sorghum for syrup.....gals.				55		
for seed.....bu.	272	2,992	4,488.00	1,213	14,556	26,928.60
for hay.....tons	13,230	16,538	165,380.00	10,385	20,770	186,930.00
Milo for grain.....bu.	66	330	462.00	372	3,720	5,394.00
for stover*.....tons		82	328.00		651	2,929.50
for hay.....tons	19	24	144.00	151	302	1,812.00
Kafir for grain.....bu.	1,698	6,792	10,527.60	1,950	19,500	30,225.00
for stover*.....tons		1,698	13,584.00		2,925	14,625.00
for hay.....tons	566	1,132	10,188.00	204	357	2,856.00
Feterita for grain.....bu.	55	220	330.00	214	1,712	2,568.00
for stover*.....tons		110	660.00		161	805.00
for hay.....tons	35	70	420.00	22	44	352.00
Sudan grass.....tons	88	176	1,760.00	471	1,060	10,600.00
Jerusalem corn.....tons	8	16	144.00	7	12	96.00
Alfalfa.....tons	2,836	7,941	134,997.00	4,006	11,017	198,306.00
Timothy.....tons						
Clover.....tons	8					
Blue grass.....tons						
Sweet clover.....tons	93	†		40	†	
Orchard grass.....tons						
Other tame grasses.....tons				10		
Prairie hay.....tons	4,790	4,790	62,270.00	4,989	3,742	56,130.00
Totals.....	203,088		\$3,048,584.74	225,473		\$3,679,375.27

Corn on hand March 1, 1917, 79,160 bushels; March 1, 1918, 188,880 bushels.

Wheat on hand March 1, 1917, 159,668 bushels; March 1, 1918, 42,430 bushels.

Prairie grass for pasture March 1, 1918; Acres fenced, 215,302; acres not fenced, 32,158.

* Forage after harvesting grain. † Product of 1916. ‡ Product of 1917.

SUMMARY.—CHEYENNE COUNTY.

Showing quantity and value of farm products in the county for 1917 and 1918.

Products.	1917.		1918.	
	Quantity.	Value.	Quantity.	Value.
Field crops.....acres	203,088	\$3,048,584.74	225,473	\$3,679,375.27
Animals slaughtered or sold for slaughter.....		274,615.00		356,864.00
Poultry and eggs sold.....		55,540.00		68,050.00
Wool clip.....lbs.	450	126.00	44	23.76
Cheese.....lbs.	945	160.65	35	6.30
Butter.....lbs.	64,961	19,488.30	63,984	24,953.76
Condensed milk.....lbs.				
Milk sold.....		36,419.00		52,243.00
Honey and beeswax.....lbs.				
Wood marketed.....				22.00
Totals.....		\$3,434,933.69		\$4,181,538.09

Number of cream separators March 1, 1917, 369; March 1, 1918, 455.

Number of silos March 1, 1917, 23; March 1, 1918, 23.

Number of tractors March 1, 1917, 33; March 1, 1918, 52.

CLARK COUNTY.

Organized in 1885; area, 617,889 acres; population, 5,048; rank in population, 86; assessed valuation, \$14,543,185; miles of railroad, main track, 38.26; county seat, Ashland; population, 1,226.

POPULATION AND VALUATION.—CLARK COUNTY.

Table showing total population, by townships and cities, for 1917 and 1918, and the assessed valuation of the municipal townships and cities of 1918.

Townships (and cities).	Population.		Assessed valuation of property, 1918.				
	1917.	1918.	Land.	City lots.	Personal.	Railroad, etc.	Total.
The county.....	5,335	5,048	\$7,242,100	\$859,338	\$4,868,870	\$1,572,877	\$14,543,185
Minneola.....	614	504		\$174,720	\$240,645	\$41,576	\$456,941
Appleton tp.....	638	580	\$1,329,085		286,635	419,929	2,035,649
Brown tp.....	318	276	826,930		393,445	217	1,220,592
Ashland.....	1,328	1,226		498,110	541,065	17,276	1,056,451
Center tp.....	339	344	899,475		608,985	324,848	1,833,308
Cimarron tp.....	162	151	614,610		319,740		934,350
Edwards tp.....	160	178	490,725	3,737	412,810	128,779	1,036,051
Englewood.....	488	454		135,246	170,885	61,143	367,274
Englewood tp.....	134	162	468,915		279,445	178,808	927,168
Lexington tp.....	306	313	676,365		420,095	112	1,096,572
Liberty tp.....	162	214	467,940		207,950	73	675,963
Sitka tp.....	539	504	906,885	47,525	544,425	399,344	1,898,179
Vesta tp.....	147	142	561,170		442,745	772	1,004,687

LIVESTOCK.—CLARK COUNTY.

Table showing number, value and mortality of livestock in the county for 1917 and 1918.

Livestock.	1917.		1918.		Mortality.	
	Number.	Value.	Number.	Value.	1917.	1918.
Horses.....	5,712	\$685,440.00	5,661	\$628,371.00	29	184
Mules and asses.....	2,743	370,305.00	2,040	285,600.00	6	34
Milk cows.....	1,659	124,425.00	2,677	219,514.00		82
Other cattle.....	39,385	1,969,250.00	40,642	2,194,668.00	183	588
Sheep.....	46	506.00	58	725.00		10
Swine.....	4,632	94,956.00	3,461	77,872.50	343	178
Totals.....	54,177	\$3,244,882.00	54,539	\$3,406,750.50	561	1,076

Number of dogs in county March 1, 1917, 273; March 1, 1918, 426.

Number of sheep killed by dogs, year ending March 1, 1918, 1.

Number of sheep killed by wolves, year ending March 1, 1917, 3.

Mortality of swine from cholera, year ending March 1, 1917, 260; March 1, 1918, 26.

FARM AND CROP STATISTICS.—CLARK COUNTY.

Table showing acres, product and value of field crops in the county for 1917 and 1918.

Crops.	1917.			1918.		
	Acres.	Product.	Value.	Acres.	Product.	Value.
Winter wheat..... bu.	17,163	85,815	\$182,685.95	51,520	412,160	\$816,076.80
Spring wheat..... bu.	125	250	515.00			
Corn..... bu.	48,185	192,740	215,868.80	25,608	25,608	38,412.00
Oats..... bu.	10,904			14,458	28,916	23,132.80
Rye..... bu.	487	487	852.25	1,087	8,696	14,348.40
Barley..... bu.	9,270			3,967	11,901	11,901.00
Emmer ("speltz")..... bu.						
Irish potatoes..... bu.	35	210	336.00	102	510	816.00
Sweet potatoes..... bu.	4	60	120.00			
Cowpeas..... tons				1	2	33.00
Flax..... bu.						
Broom corn..... lbs.	5	1,750	227.50	375	112,500	11,250.00
Millet..... tons	30	23	241.50	48	36	396.00
Sugar beets..... tons	2	20	110.00			
Sorghum for syrup..... gals.				120		
for seed..... bu.	634			2,664	26,640	49,284.00
for hay..... tons	7,972	13,951	97,657.00	8,578	12,867	115,803.00
Milo for grain..... bu.	11,673	35,019	49,026.60	16,407	131,256	196,884.00
for stover*..... tons		11,673	46,692.00		20,509	123,054.00
for hay..... tons	10	10	70.00	110	220	1,760.00
Kafir for grain..... bu.	41,011	164,044	229,661.60	31,337	188,022	282,033.00
for stover*..... tons		51,264	410,112.00		39,171	274,197.00
for hay..... tons	260	520	3,640.00	634	1,268	10,778.00
Peterita for grain..... bu.	5,743	57,430	80,402.00	5,249	68,237	98,943.65
for stover*..... tons		5,743	28,715.00		5,249	26,245.00
for hay..... tons	568	568	4,544.00	565	989	6,923.00
Sudan grass..... tons	84	168	1,344.00	957	1,914	21,054.00
Jerusalem corn..... tons				95	190	1,615.00
Alfalfa..... tons	2,339	4,210	75,780.00	2,015	3,526	74,046.00
Timothy..... tons						
Clover..... tons						
Blue grass..... tons						
Sweet clover..... tons	30	†		64	‡	
Orchard grass..... tons						
Other tame grasses..... tons						
Prairie hay..... tons	905	905	12,670.00	284	284	4,544.00
Totals.....	157,439		\$1,441,271.20	166,245		\$2,203,529.65

Corn on hand March 1, 1917, 21,625 bushels; March 1, 1918, 10,265 bushels.

Wheat on hand March 1, 1917, 54,470 bushels; March 1, 1918, 3,313 bushels.

Prairie grass for pasture March 1, 1918: Acres fenced, 257,573; acres not fenced, 660.

* Forage after harvesting grain. † Product of 1916. ‡ Product of 1917.

SUMMARY.—CLARK COUNTY.

Showing quantity and value of farm products in the county for 1917 and 1918.

Products.	1917.		1918.	
	Quantity.	Value.	Quantity.	Value.
Field crops..... acres	157,439	\$1,441,271.20	166,245	\$2,203,529.65
Animals slaughtered or sold for slaughter.....		219,625.00		635,439.00
Poultry and eggs sold.....		25,046.00		26,805.00
Wool clip..... lbs.	150	42.00	100	54.00
Cheese..... lbs.	25	4.25	30	5.40
Butter..... lbs.	23,800	7,140.00	30,103	11,740.17
Condensed milk..... lbs.				
Milk sold.....		20,435.00		36,022.00
Honey and beeswax..... lbs.				
Wood marketed.....				
Totals.....		\$1,713,563.45		\$2,913,595.22

Number of cream separators March 1, 1917, 126; March 1, 1918, 239.

Number of silos March 1, 1917, 31; March 1, 1918, 48.

Number of tractors March 1, 1917, 28; March 1, 1918, 33.

CLAY COUNTY.

Organized in 1866; area, 419,217 acres; population, 15,196; rank in population, 41; assessed valuation, \$34,865,049; miles of railroad, main track, 95.78; county seat, Clay Center; population, 4,031.

POPULATION AND VALUATION.—CLAY COUNTY.

Table showing total population, by townships and cities, for 1917 and 1918, and the assessed valuation of the municipal townships and cities of 1918.

Townships (and cities).	Population.		Assessed valuation of property, 1918.				
	1917.	1918.	Land.	City lots.	Personal.	Railroad, etc.	Total.
The county.....	15,225	15,196	\$19,336,207	\$3,303,970	\$8,739,950	\$3,484,922	\$34,865,049
Athelstane tp.....	605	582	\$1,086,677	\$15,315	\$340,150	\$1,623	\$1,443,765
Blaine tp.....	585	583	1,408,027	.....	338,640	89,725	1,836,392
Bloom tp.....	635	627	1,293,858	.....	292,178	471	1,586,507
Longford.....	188	190	.....	45,700	118,230	19,049	182,979
Chapman tp.....	503	507	854,452	.....	247,030	243,457	1,344,937
Clay Center.....	4,006	4,031	.....	2,384,185	1,900,140	185,276	4,469,601
Clay Center tp.....	810	839	1,603,077	21,185	462,095	984,047	3,070,404
Exeter tp.....	476	475	1,093,027	.....	230,229	2,060	1,325,316
Five Creeks tp.....	583	580	869,651	54,415	299,790	125,756	1,349,612
Garfield tp.....	526	514	1,036,914	.....	323,030	1,530	1,361,474
Gill tp.....	418	429	716,655	.....	270,930	1,457	989,042
Goshen tp.....	442	459	894,049	.....	253,230	2,121	1,149,400
Grant tp.....	427	435	821,186	.....	314,480	348,004	1,483,670
Hayes tp.....	561	560	1,269,301	.....	284,885	76,035	1,630,221
Green.....	307	302	.....	103,930	190,180	10,864	304,974
Highland tp.....	510	513	1,019,517	.....	376,205	87,867	1,483,589
Clifton.....	302	285	.....	161,595	306,982	69,488	538,065
Vining.....	109	86	.....	34,895	20,514	10	55,419
Mulberry tp.....	481	463	1,303,310	.....	307,552	122,912	1,733,774
Oakland tp.....	551	547	649,191	45,705	203,200	188,260	1,086,356
Wakefield.....	517	501	.....	287,435	468,075	13,941	769,451
Republican tp.....	462	471	1,123,347	.....	350,070	191,994	1,665,411
Morganville.....	250	235	.....	149,610	201,027	47,308	397,945
Sherman tp.....	512	510	1,287,280	.....	281,303	669,256	2,237,839
Union tp.....	459	472	1,006,688	.....	359,805	2,411	1,368,904

LIVESTOCK.—CLAY COUNTY.

Table showing number, value and mortality of livestock in the county for 1917 and 1918.

Livestock.	1917.		1918.		Mortality.	
	Number.	Value.	Number.	Value.	1917.	1918.
Horses.....	11,656	\$1,398,720.00	11,463	\$1,272,393.00	100	271
Mules and asses.....	2,542	343,170.00	2,199	307,860.00	17	17
Milk cows.....	6,800	510,000.00	8,859	726,438.00	49	145
Other cattle.....	24,989	1,249,450.00	24,490	1,322,460.00	214	615
Sheep.....	708	7,788.00	615	7,687.50	2	20
Swine.....	19,970	409,385.00	24,762	557,145.00	355	525
Totals.....	66,665	\$3,918,513.00	72,388	\$4,193,983.50	737	1,593

Number of dogs in county March 1, 1917, 1,418; March 1, 1918, 1,666.

Mortality of swine from cholera, year ending March 1, 1917, 184; March 1, 1918, 216.

FARM AND CROP STATISTICS.—CLAY COUNTY.

Table showing acres, product and value of field crops in the county for 1917 and 1918.

Crops.	1917.			1918.		
	Acres.	Product.	Value.	Acres.	Product.	Value.
Winter wheat.....bu.	15,820	142,380	\$287,607.60	63,289	632,890	\$1,272,108.90
Spring wheat.....bu.				253	2,024	4,048.00
Corn.....bu.	126,196	1,892,940	1,987,587.00	88,825	355,300	532,950.00
Oats.....bu.	60,720	1,821,600	1,074,744.00	49,505	891,090	605,941.20
Rye.....bu.	249	3,486	5,926.20	1,112	14,456	22,985.04
Barley.....bu.	1,138	25,036	25,036.00	1,466	21,990	23,089.50
Emmer ("speltz").....bu.						
Irish potatoes.....bu.	986	38,454	54,604.68	1,063	24,449	35,451.05
Sweet potatoes.....bu.						
Cowpeas.....tons				1	2	33.00
Flax.....bu.						
Broom corn.....lbs.				10	2,500	250.00
Millet.....tons	2,112	3,168	28,512.00	1,177	1,766	19,426.00
Sugar beets.....tons						
Sorghum for syrup.....gals.	184	9,200	6,440.00	35	1,750	1,925.00
for seed.....bu.	250	2,500	3,750.00	686	6,174	12,348.00
for hay.....tons	3,506	7,012	42,072.00	4,035	9,079	86,250.50
Milo for grain.....bu.	41	328	328.00	118	944	1,604.80
for stover*.....tons		82	246.00		207	1,449.00
for hay.....tons	12	30	195.00	13	26	221.00
Kafir for grain.....bu.	4,345	34,760	51,444.80	2,835	34,020	59,535.00
for stover*.....tons		13,035	52,140.00		6,379	41,463.50
for hay.....tons	613	1,226	8,582.00	571	1,142	10,278.00
Feterita for grain.....bu.	1,095	15,330	17,936.10	889	12,446	19,913.60
for stover*.....tons		2,464	11,088.00		2,000	13,000.00
for hay.....tons	132	396	2,970.00	258	774	6,192.00
Sudan grass.....tons	603	1,809	15,376.50	2,452	6,743	67,430.00
Jerusalem corn.....tons	21	42	294.00	55	110	990.00
Alfalfa.....tons	16,941	35,576	569,216.00	19,164	28,746	661,158.00
Timothy.....tons				25		
Clover.....tons				10		
Blue grass.....tons	20	†		1	‡	
Sweet clover.....tons	33			65	90	1,800.00
Orchard grass.....tons						
Other tame grasses.....tons	66			7		
Prairie hay.....tons	10,994	8,245	98,940.00	11,360	5,680	102,240.00
Totals.....	246,077		\$4,345,035.88	249,280		\$3,604,081.09

Corn on hand March 1, 1917, 259,395 bushels; March 1, 1918, 386,019 bushels.

Wheat on hand March 1, 1917, 59,161 bushels; March 1, 1918, 21,869 bushels.

Prairie grass for pasture March 1, 1918: Acres fenced, 92,193; acres not fenced, 545.

* Forage after harvesting grain. † Product of 1916. ‡ Product of 1917.

SUMMARY.—CLAY COUNTY.

Showing quantity and value of farm products in the county for 1917 and 1918.

Products.	1917.		1918.	
	Quantity.	Value.	Quantity.	Value.
Field crops.....acres	246,077	\$4,345,035.88	249,280	\$3,604,081.09
Animals slaughtered or sold for slaughter.....		1,068,994.00		1,574,774.00
Poultry and eggs sold.....		216,969.00		250,328.00
Wool clip.....lbs.	950	266.00	4,692	2,533.68
Cheese.....lbs.	80	13.60	30	5.40
Butter.....lbs.	273,614	82,084.20	600,367	244,991.40
Condensed milk.....lbs.				
Milk sold.....		119,573.00		226,393.00
Honey and beeswax.....lbs.	3,807	690.46	2,605	651.65
Wood marketed.....		370.00		612.00
Totals.....		\$5,833,996.14		\$5,004,370.22

Number of cream separators March 1, 1917, 1,058; March 1, 1918, 1,356.

Number of silos March 1, 1917, 99; March 1, 1918, 135.

Number of tractors March 1, 1917, 48; March 1, 1918, 43.

CLOUD COUNTY.

Organized in 1866; area, 456,872 acres; population, 17,819; rank in population, 33; assessed valuation, \$39,623,930; miles of railroad, main track, 125.55; county seat, Concordia; population, 4,321.

POPULATION AND VALUATION.—CLOUD COUNTY.

Table showing total population, by townships and cities, for 1917 and 1918, and the assessed valuation of the municipal townships and cities of 1918.

Townships (and cities).	Population.		Assessed valuation of property, 1918.				
	1917.	1918.	Land.	City lots.	Personal.	Railroad, etc.	Total.
The county.....	19,212	17,819	\$21,014,895	\$4,906,395	\$8,979,420	\$4,723,220	\$39,623,930
Arion tp.....	507	485	\$899,301	.....	\$224,155	\$1,985	\$1,125,441
Aurora.....	313) 922	301) 914	.....	\$107,270	187,735	13,701	308,706
Aurora tp.....	609)	613)	996,390	.....	257,620	271,626	1,525,636
Buffalo tp.....	644	634	1,635,115	725	334,660	614,037	2,584,537
Center tp.....	675	663	1,372,300	.....	265,360	838	1,638,498
Colfax tp.....	546	473	862,548	.....	211,305	4,304	1,078,157
Clyde.....	1,182)	1,094)	.....	594,625	522,855	136,481	1,253,961
Elk tp.....	457) 1,639	472) 1,566	1,011,031	.....	248,960	478,847	1,738,838
Jamestown.....	540)	496	.....	255,535	212,290	33,979	501,804
Grant tp.....	471) 1,011	400) 896	1,261,909	560	244,280	298,577	1,805,326
Lawrence tp.....	691	691	1,192,932	25,565	327,785	677,905	2,224,187
Concordia.....	5,085) 5,505	4,321) 4,720	.....	3,199,040	2,330,185	304,935	5,834,160
Lincoln tp.....	420)	399)	872,749	.....	193,860	649,003	1,715,612
Lyon tp.....	620	613	1,458,857	.....	381,610	77,881	1,918,348
Meredith tp.....	442	427	769,622	.....	196,290	1,628	967,540
Nelson tp.....	510	497	1,202,393	.....	222,450	156,303	1,581,146
Oakland tp.....	468	451	802,575	.....	258,425	103,256	1,164,256
Shirley tp.....	890	883	1,549,186	27,555	497,290	166,283	2,240,314
Sibley tp.....	497	466	1,138,097	.....	168,275	58,508	1,364,880
Glasco.....	778)	710)	.....	306,460	359,905	7,273	673,638
Solomon tp.....	666) 1,444	701) 1,411	1,884,960	3,400	445,180	243,436	2,576,976
Miltonvale.....	1,003) 1,597	907) 1,437	.....	378,010	396,840	64,456	839,306
Starr tp.....	594)	530)	767,782	7,650	212,615	310,271	1,298,318
Summit tp.....	604	592	1,337,148	.....	279,490	47,707	1,664,345

LIVESTOCK.—CLOUD COUNTY.

Table showing number, value and mortality of livestock in the county for 1917 and 1918.

Livestock.	1917.		1918.		Mortality.	
	Number.	Value.	Number.	Value.	1917.	1918.
Horses.....	13,375	\$1,605,000.00	12,708	\$1,410,588.00	188	325
Mules and asses.....	3,278	442,530.00	2,633	368,620.00	8	16
Milk cows.....	7,356	551,700.00	8,875	727,750.00	83	128
Other cattle.....	19,040	952,000.00	17,585	949,590.00	366	555
Sheep.....	794	8,734.00	664	8,300.00	3	5
Swine.....	12,745	261,272.50	14,330	322,425.00	384	1,011
Totals.....	56,588	\$3,821,236.50	56,795	\$3,787,273.00	1,032	2,040

Number of dogs in county March 1, 1917, 1,421; March 1, 1918, 1,595.

Number of sheep killed by dogs, year ending March 1, 1917, 1; March 1, 1918, 8.

Mortality of swine from cholera, year ending March 1, 1917, 255; March 1, 1918, 863.

FARM AND CROP STATISTICS.—CLOUD COUNTY.

Table showing acres, product and value of field crops in the county for 1917 and 1918.

Crops.	1917.			1918.		
	Acres.	Product.	Value.	Acres.	Product.	Value.
Winter wheat..... bu.	16,549	148,941	\$306,818.46	23,427	140,562	\$274,095.90
Spring wheat..... bu.				727	5,816	11,283.04
Corn..... bu.	154,181	1,541,810	1,680,572.90	129,110	258,220	387,330.00
Oats..... bu.	71,807	1,723,368	1,016,787.12	70,333	703,330	478,264.40
Rye..... bu.	863	11,219	19,296.68	1,381	13,810	22,096.00
Barley..... bu.	1,304	26,080	26,080.00	3,584	39,424	41,395.20
Emmer ("speltz")..... bu.				20	160	116.80
Irish potatoes..... bu.	778	27,230	35,399.00	649	6,490	10,319.10
Sweet potatoes..... bu.				2	84	189.00
Cowpeas..... tons						
Flax..... bu.						
Broom corn..... lbs.	6	1,500	210.00	14	3,500	350.00
Millet..... tons	1,315	1,973	17,757.00	619	619	7,428.00
Sugar beets..... tons						
Sorghum for syrup..... gals.	5	200	140.00	43	1,720	1,892.00
for seed..... bu.	302	2,114	3,382.40	1,475	8,850	17,700.00
for hay..... tons	5,914	10,351	62,106.00	6,127	5,659	50,931.00
Milo for grain..... bu.	22	220	286.00	1,290	7,740	13,158.00
for stover*..... tons		33	132.00		1,935	12,577.50
for hay..... tons	24	48	288.00	46	69	552.00
Kafir for grain..... bu.	5,918	29,590	44,385.00	6,720	33,600	57,120.00
for stover*..... tons		10,355	82,840.00		8,400	46,200.00
for hay..... tons	129	258	1,290.00		368	3,680.00
Feterita for grain..... bu.	1,497	16,467	23,053.80	2,542	25,420	40,672.00
for stover*..... tons		2,994	14,970.00		3,813	15,252.00
for hay..... tons	704	1,584	11,088.00		302	3,174.00
Sudan grass..... tons	259	842	8,420.00	2,833	4,250	46,750.00
Jerusalem corn..... tons				23	29	232.00
Alfalfa..... tons	19,622	41,206	782,914.00	22,366	27,958	643,034.00
Timothy..... tons						
Clover..... tons						
Blue grass..... tons				3		
Sweet clover..... tons	52	†		194	‡ 200	4,000.00
Orchard grass..... tons				3		
Other tame grasses..... tons	17			36		
Prairie hay..... tons	6,318	4,738	66,332.00	7,385	3,693	62,781.00
Totals.....	287,586		\$4,204,548.36	281,622		\$2,252,572.94

Corn on hand March 1, 1917, 199,670 bushels; March 1, 1918, 143,981 bushels.

Wheat on hand March 1, 1917, 107,613 bushels; March 1, 1918, 38,138 bushels.

Prairie grass for pasture March 1, 1918: Acres fenced, 92,721; acres not fenced, 4,575.

* Forage after harvesting grain. † Product of 1916. ‡ Product of 1917.

SUMMARY.—CLOUD COUNTY.

Showing quantity and value of farm products in the county for 1917 and 1918.

Products.	1917.		1918.	
	Quantity.	Value.	Quantity.	Value.
Field crops..... acres	287,586	\$4,204,548.36	281,622	\$2,252,572.94
Animals slaughtered or sold for slaughter.....		672,019.00		967,811.00
Poultry and eggs sold.....		196,087.00		212,610.00
Wool clip..... lbs.	65	18.20	967	522.18
Cheese..... lbs.	7,460	1,268.20	7,245	1,304.10
Butter..... lbs.	2,106,813	688,488.75	2,264,412	945,370.68
Condensed milk..... lbs.				
Milk sold.....		124,925.00		203,983.00
Honey and beeswax..... lbs.	5,778	1,041.54	5,716	1,438.00
Wood marketed.....		43.00		671.00
Totals.....		\$5,888,439.05		\$4,586,282.90

Number of cream separators March 1, 1917, 857; March 1, 1918, 1,111.

Number of silos March 1, 1917, 36; March 1, 1918, 73.

Number of tractors March 1, 1917, 51; March 1, 1918, 62.

COFFEY COUNTY.

Organized in 1859; area, 416,944 acres; population, 15,330; rank in population, 39; assessed valuation, \$26,270,074; miles of railroad, main track, 117.62; county seat, Burlington; population, 2,310.

POPULATION AND VALUATION.—COFFEY COUNTY.

Table showing total population, by townships and cities, for 1917 and 1918, and the assessed valuation of the municipal townships and cities of 1918.

Townships (and cities).	Population.		Assessed valuation of property, 1918.				
	1917.	1918.	Land.	City lots.	Personal.	Railroad, etc.	Total.
The county.....	15,015	15,330	\$14,534,009	\$1,932,404	\$5,770,526	\$4,033,135	\$26,270,074
Avon tp.....	649	669	\$680,207	\$18,825	\$210,190	\$154,571	\$1,063,793
Burlington.....	2,316	2,310	781,778	1,062,555	81,067	81,067	1,925,400
Burlington tp.....	689	699	837,812	251,018	351,147	351,147	1,439,977
California tp.....	869	838	1,012,860	35,905	374,955	167,526	1,591,246
Hampden tp.....	504	523	692,687	164,620	223,585	223,585	1,080,892
Key West tp.....	899	806	1,041,789	28,074	227,600	9,072	1,306,535
Le Roy.....	761	800	187,405	214,497	187,405	79,087	480,989
Le Roy tp.....	341	357	468,978	147,009	297,745	297,745	913,732
Gridley.....	250	265	81,580	203,285	28,737	313,602	313,602
Liberty tp.....	1,002	1,039	1,416,056	458,588	367,140	2,241,734	2,241,734
Lebo.....	565	606	185,890	236,549	94,301	516,740	516,740
Lincoln tp.....	569	611	1,083,230	260,920	578,731	1,922,881	1,922,881
Neosho tp.....	586	608	838,405	1,933	303,409	340,088	1,483,835
Ottumwa tp.....	908	941	1,168,996	12,870	327,445	198,616	1,707,927
Pleasant tp.....	766	782	1,199,267	310,655	107,739	1,617,661	1,617,661
Pottawatomie tp.....	731	764	1,165,225	331,255	35,788	1,532,268	1,532,268
Waverly.....	703	739	277,075	207,030	39,277	523,382	523,382
Rock Creek tp.....	866	880	1,500,244	13,200	382,615	605,790	2,501,849
Spring Creek tp.....	481	504	752,303	201,690	272,220	1,226,213	1,226,213
Star tp.....	560	589	675,950	202,560	908	879,418	879,418

LIVESTOCK.—COFFEY COUNTY.

Table showing number, value and mortality of livestock in the county for 1917 and 1918.

Livestock.	1917.		1918.		Mortality.	
	Number.	Value.	Number.	Value.	1917.	1918.
Horses.....	10,326	\$1,239,120.00	10,800	\$1,198,800.00	184	108
Mules and asses.....	2,657	358,695.00	2,281	319,340.00	25	11
Milk cows.....	6,691	501,825.00	7,944	651,408.00	125	65
Other cattle.....	21,799	1,089,950.00	24,170	1,305,180.00	196	217
Sheep.....	1,365	15,015.00	2,581	32,262.50	10	148
Swine.....	13,862	284,171.00	18,167	408,757.50	379	171
Totals.....	56,700	\$3,488,776.00	65,943	\$3,915,748.00	919	720

Number of dogs in county March 1, 1917, 1,215; March 1, 1918, 1,586.

Number of sheep killed by dogs, year ending March 1, 1917, 1; March 1, 1918, 4.

Number of sheep killed by wolves, year ending March 1, 1917, 10; March 1, 1918, 1.

Mortality of swine from cholera, year ending March 1, 1917, 24; March 1, 1918, 3.

FARM AND CROP STATISTICS.—COFFEY COUNTY.

Table showing acres, product and value of field crops in the county for 1917 and 1918.

Crops.	1917.			1918.		
	Acres.	Product.	Value.	Acres.	Product.	Value.
Winter wheat.....bu.	10,507	252,168	\$516,944.40	39,309	982,725	\$2,004,759.00
Spring wheat.....bu.						
Corn.....bu.	77,259	1,313,403	1,471,011.36	59,431	356,586	534,879.00
Oats.....bu.	24,649	838,066	477,697.62	32,658	914,424	640,096.80
Rye.....bu.	718	13,642	22,509.30	2,369	45,011	69,767.05
Barley.....bu.	11	275	275.00	85	1,700	1,785.00
Emmer ("speltz").....bu.	30	750	450.00			
Irish potatoes.....bu.	572	34,320	53,196.00	552	31,464	44,993.52
Sweet potatoes.....bu.	1	90	135.00			
Cowpeas.....tons	12	15	240.00	29	44	726.00
Flax.....bu.	1,861	12,096	32,659.20	818	4,499	14,621.75
Broom corn.....lbs.	1	400	56.00	2	600	60.00
Millet.....tons	248	372	3,720.00	201	302	3,322.00
Sugar beets.....tons						
Sorghum for syrup.....gals.	56	3,360	2,352.00	112	6,160	6,776.00
for seed.....bu.	411	4,521	5,922.51	1,198	14,376	25,158.00
for hay.....tons	1,402	4,907	24,535.00	2,055	5,651	53,684.50
Milo for grain.....bu.	589	7,657	9,571.25	816	8,160	13,056.00
for stover*.....tons		736	4,416.00		1,428	7,140.00
for hay.....tons	25	62	372.00	64	128	832.00
Kafir for grain.....bu.	20,113	181,017	253,423.80	14,856	89,136	142,617.60
for stover*.....tons		65,367	326,835.00		40,854	265,551.00
for hay.....tons	556	1,946	9,730.00	5	13	104.00
Feterita for grain.....bu.	360	5,040	7,106.40	413	4,956	8,425.20
for stover*.....tons		1,080	4,320.00		1,136	4,544.00
for hay.....tons	104	312	1,560.00	109	327	1,962.00
Sudan grass.....tons	89	267	2,136.00	92	322	3,864.00
Jerusalem corn.....tons	9	31	155.00	17	43	344.00
Alfalfa.....tons	5,827	17,481	314,658.00	7,576	17,046	375,012.00
Timothy.....tons	4,972			5,640		
Clover.....tons	5,455			3,046		
Blue grass.....tons	1,699			1,254		
Sweet clover.....tons	587	† 12,244	183,660.00	301	‡ 10,355	207,100.00
Orchard grass.....tons	7			15		
Other tame grasses.....tons	737			163		
Prairie hay.....tons	37,669	37,669	565,035.00	36,385	27,289	491,202.00
Totals.....	196,536		\$4,294,681.84	209,571		\$4,922,382.42

Corn on hand March 1, 1917, 27,858 bushels; March 1, 1918, 181,763 bushels.

Wheat on hand March 1, 1917, 482 bushels; March 1, 1918, 4,511 bushels.

Prairie grass for pasture March 1, 1918: Acres fenced, 91,556.

* Forage after harvesting grain. † Product of 1916. ‡ Product of 1917.

SUMMARY.—COFFEY COUNTY.

Showing quantity and value of farm products in the county for 1917 and 1918.

Products.	1917.		1918.	
	Quantity.	Value.	Quantity.	Value.
Field crops.....acres	196,536	\$4,294,681.84	209,571	\$4,922,382.42
Animals slaughtered or sold for slaughter.....		678,723.00		1,075,445.00
Poultry and eggs sold.....		190,980.00		199,119.00
Wool clip.....lbs.	3,183	891.24	4,106	2,217.24
Cheese.....lbs.	4,015	682.55		
Butter.....lbs.	205,540	61,662.00	203,166	79,234.74
Condensed milk.....lbs.				
Milk sold.....		100,097.00		169,701.00
Honey and beeswax.....lbs.	39,456	7,145.98	12,977	3,244.90
Wood marketed.....		1,615.00		947.00
Totals.....		\$5,336,478.61		\$6,452,291.30

Number of cream separators March 1, 1917, 857; March 1, 1918, 933.

Number of silos March 1, 1917, 115; March 1, 1918, 76.

Number of tractors March 1, 1917, 17; March 1, 1918, 50.

COMANCHE COUNTY.

Organized in 1885; area, 504,299 acres; population, 5,353; rank in population, 84; assessed valuation, \$13,952,408; miles of railroad, main track, 27.59; county seat, Coldwater; population, 1,177.

POPULATION AND VALUATION.—COMANCHE COUNTY.

Table showing total population, by townships and cities, for 1917 and 1918, and the assessed valuation of the municipal townships and cities of 1918.

Townships (and cities).	Population.		Assessed valuation of property, 1918.				
	1917.	1918.	Land.	City lots.	Personal.	Railroad, etc.	Total.
The county	5,945	5,353	\$7,831,050	\$945,845	\$4,085,095	\$1,090,418	\$13,952,408
Avilla tp.	462	442	\$1,543,130	.....	\$366,000	.....	\$1,909,130
Coldwater.....	1,467	1,177	.....	\$551,965	649,225	\$52,753	1,253,943
Coldwater tp.	845	761	2,122,485	.....	520,660	515,919	3,159,064
Irwin tp.	115	100	340,390	.....	88,685	323	429,398
Logan tp.	106	129	337,185	.....	236,835	50	574,070
Nescatunga tp.	192	184	410,880	1,510	161,055	706	574,151
Wilmore.....	260	237	.....	.....	.....	.....	.....
Powell tp.	447	191	469,755	73,495	444,935	262,367	1,250,552
Protection.....	1,018	1,145	.....	318,875	484,845	43,518	847,238
Protection tp.	498	477	980,625	.....	402,650	214,782	1,598,057
Rumsey tp.	99	106	512,980	.....	187,665	.....	700,645
Shimer tp.	173	167	555,150	.....	354,340	.....	909,490
Valley tp.	263	237	558,470	.....	188,200	.....	746,670

LIVESTOCK.—COMANCHE COUNTY.

Table showing number, value and mortality of livestock in the county for 1917 and 1918.

Livestock.	1917.		1918.		Mortality.	
	Number.	Value.	Number.	Value.	1917.	1918.
Horses.....	5,940	\$712,800.00	6,225	\$690,975.00	57	91
Mules and asses.....	2,832	382,320.00	2,502	350,280.00	8	12
Milk cows.....	1,242	93,150.00	1,892	155,144.00	13	37
Other cattle.....	27,866	1,393,300.00	26,803	1,447,362.00	242	347
Sheep.....	125	1,375.00	133	1,662.50	3	1
Swine.....	9,466	194,053.00	5,440	122,400.00	248	192
Totals.....	47,471	\$2,776,998.00	42,995	\$2,767,823.50	571	680

Number of dogs in county March 1, 1917, 414; March 1, 1918, 461.

Mortality of swine from cholera, year ending March 1, 1917, 219; March 1, 1918, 71.

FARM AND CROP STATISTICS.—COMANCHE COUNTY.

Table showing acres, product and value of field crops in the county for 1917 and 1918.

Crops.	1917.			1918.		
	Acres.	Product.	Value.	Acres.	Product.	Value.
Winter wheat.....bu.	69,488	416,928	\$813,009.60	100,574	1,206,888	\$2,413,776.00
Spring wheat.....bu.						
Corn.....bu.	51,438	154,314	171,288.54	18,594	37,188	55,782.00
Oats.....bu.	9,715	38,860	27,979.20	7,608	68,472	54,777.60
Rye.....bu.	1,017	5,085	8,898.75	869	9,559	15,581.17
Barley.....bu.	2,707	21,656	21,222.88	379	3,032	3,183.60
Emmer ("speltz").....bu.						
Irish potatoes.....bu.	154	3,850	6,352.50	136		
Sweet potatoes.....bu.	3	225	450.00	2	20	45.00
Cowpeas.....tons				2	3	49.50
Flax.....bu.						
Broom corn.....lbs.	100	40,000	5,600.00	20	6,000	600.00
Millet.....tons	9	9	90.00	89	67	737.00
Sugar beets.....tons						
Sorghum for syrup.....gals.				79		
for seed.....bu.	291	2,037	2,851.80	508	4,064	8,128.00
for hay.....tons	7,007	17,518	87,590.00	7,575	11,363	90,904.00
Milo for grain.....bu.	6,893	103,395	139,583.25	6,004	66,044	99,066.00
for stover*.....tons		6,893	20,679.00		10,507	68,295.50
for hay.....tons	50	75	375.00	80	160	1,280.00
Kafir for grain.....bu.	31,789	317,890	441,867.10	30,752	246,016	369,024.00
for stover*.....tons		63,578	254,312.00		38,440	230,640.00
for hay.....tons	2,744	7,546	37,730.00	471	707	6,009.50
Feterita for grain.....bu.	5,081	50,810	71,642.10	4,320	51,840	75,168.00
for stover*.....tons		7,622	34,299.00		5,400	27,000.00
for hay.....tons	65	98	490.00	174	348	2,436.00
Sudan grass.....tons	273	546	4,368.00	1,347	2,694	28,287.00
Jerusalem corn.....tons				10	15	127.50
Alfalfa.....tons	1,842	4,605	82,890.00	2,411	5,425	113,925.00
Timothy.....tons						
Clover.....tons						
Blue grass.....tons						
Sweet clover.....tons	24	†		139	‡ 140	2,660.00
Orchard grass.....tons	7			3		
Other tame grasses.....tons						
Prairie hay.....tons	669	669	8,697.00	1,336	1,002	16,032.00
Totals.....	191,366		\$2,242,265.72	183,482		\$3,683,514.37

Corn on hand March 1, 1917, 6,612 bushels; March 1, 1918, 2,121 bushels.

Wheat on hand March 1, 1917, 63,392 bushels; March 1, 1918, 9,233 bushels.

Prairie grass for pasture March 1, 1918: Acres fenced, 210,793; acres not fenced, 3,071.

* Forage after harvesting grain. † Product of 1916. ‡ Product of 1917.

SUMMARY.—COMANCHE COUNTY.

Showing quantity and value of farm products in the county for 1917 and 1918.

Products.	1917.		1918.	
	Quantity.	Value.	Quantity.	Value.
Field crops.....acres	191,366	\$2,242,265.72	183,482	\$3,683,514.37
Animals slaughtered or sold for slaughter.....		533,110.00		541,413.00
Poultry and eggs sold.....		40,864.00		37,715.00
Wool clip.....lbs.	129	36.12		
Cheese.....lbs.	200	34.00		
Butter.....lbs.	65,265	19,579.50	64,085	24,993.15
Condensed milk.....lbs.				
Milk sold.....		12,720.00		21,958.00
Honey and beeswax.....lbs.				
Wood marketed.....		108.00		30.00
Totals.....		\$2,848,717.34		\$4,309,623.52

Number of cream separators March 1, 1917, 237; March 1, 1918, 295.

Number of silos March 1, 1917, 36; March 1, 1918, 46.

Number of tractors March 1, 1917, 43; March 1, 1918, 51.

COWLEY COUNTY.

Organized in 1870; area, 726,719 acres; population, 33,051; rank in population, 11; assessed valuation, \$63,105,331; miles of railroad, main track, 224.09; county seat, Winfield; population, 7,287.

POPULATION AND VALUATION.—COWLEY COUNTY.

Table showing total population, by townships and cities, for 1917 and 1918, and the assessed valuation of the municipal townships and cities of 1918.

Townships (and cities).	Population.		Assessed valuation of property, 1918.				
	1917.	1918.	Land.	City lots.	Personal.	Railroad, etc.	Total.
The county	32,535	33,051	\$26,094,763	\$11,172,594	\$14,322,185	\$11,515,789	\$63, 105, 331
Beaver tp	476	476	\$1,317,069		\$356,065	\$308,323	\$1,981,457
Gauda Springs				\$26,130	21,660		47,790
Bolton tp	955	895	1,874,451	18,850	477,780	537,393	2,908,474
Cedar tp	279	295	566,988		148,905	71,305	787,198
Arkansas City	8,652	9,811		5,091,925	3,267,190	733,156	9,092,271
Creswell tp	971	967	2,557,131	42,380	471,125	914,976	3,985,612
Dexter	540	419		163,810	103,485	47,485	317,405
Dexter tp	609	1,149	1,147,664	4,895	488,625	331,844	1,973,028
Fairview tp	525	496	1,060,946	2,130	382,435	515,326	1,860,837
Grant tp	386	388	537,641		219,165	152	756,958
Harvey tp	425	442	818,174		253,100	38,683	1,109,957
Liberty tp	476	478	931,034		304,670	198,287	1,433,991
Maple tp	502	526	857,084		173,010	336,452	1,366,546
Udall	328	334		121,070	137,395	32,022	290,487
Ninnescah tp	535	541	1,086,676	375	269,110	631,862	1,988,023
Atlanta	335	306		93,540	146,545	22,649	262,734
Omnia tp	280	334	588,146		156,555	393,682	1,138,383
Otter tp	285	287	652,234		300,480	126,486	1,079,200
Pleasant Valley tp	753	742	1,687,921	3,310	466,390	709,488	2,867,109
Richland tp	806	486	765,810	14,206	256,010	203,834	1,239,860
Rock Creek tp	645	658	1,076,045	12,900	310,735	359,628	1,759,308
Salem tp	650	650	749,973	24,810	285,025	398,963	1,458,771
Sheridan tp	427	401	677,297	1,437	237,930	336,591	1,253,255
Burden	434	436		150,160	201,675	25,925	377,760
Silver Creek tp	473	907	860,848		255,920	401,827	1,518,595
Silverdale tp	576	594	807,394	24,100	320,335	288,720	1,440,549
Spring Creek tp	395	403	551,669	2,974	187,085	185,823	927,551
Tisdale tp	469	480	720,989	2,747	223,300	211,092	1,158,128
Vernon tp	745	748	1,600,070	18,230	393,965	1,104,169	3,116,434
Winfield	7,932	7,287		5,289,180	2,621,105	631,272	8,541,557
Walnut tp	904	907	1,365,819	3,125	449,705	585,326	2,403,975
Cambridge	220	408		55,475	98,165	38,116	191,756
Windsor tp	547	763	1,235,690	2,210	437,540	794,932	2,470,372

* Not reported separately from township in 1917 or 1918.

LIVESTOCK.—COWLEY COUNTY.

Table showing number, value and mortality of livestock in the county for 1917 and 1918.

Livestock.	1917.		1918.		Mortality.	
	Number.	Value.	Number.	Value.	1917.	1918.
Horses	16,407	\$1,968,840.00	16,091	\$1,786,101.00	280	355
Mules and asses	4,300	580,500.00	3,752	525,280.00	22	38
Milk cows	11,836	887,700.00	12,643	1,036,726.00	212	332
Other cattle	42,005	2,100,250.00	46,635	2,518,290.00	698	983
Sheep	2,801	30,811.00	2,433	30,412.50	91	40
Swine	22,783	467,051.50	22,735	511,537.50	1,957	1,310
Totals	100,132	\$6,035,152.50	104,289	\$6,408,347.00	3,260	3,058

Number of dogs in county March 1, 1917, 2,056; March 1, 1918, 2,623.

Number of sheep killed by dogs, year ending March 1, 1917, 30; March 1, 1918, 89.

Number of sheep killed by wolves, year ending March 1, 1917, 8; March 1, 1918, 38.

Mortality of swine from cholera, year ending March 1, 1917, 1,386; March 1, 1918, 686.

FARM AND CROP STATISTICS.—COWLEY COUNTY.

Table showing acres, product and value of field crops in the county for 1917 and 1918.

Crops.	1917.			1918.		
	Acres.	Product.	Value.	Acres.	Product.	Value.
Winter wheat.....bu.	57,907	984,419	\$2,008,214.76	82,586	1,651,720	\$3,303,440.00
Spring wheat.....bu.						
Corn.....bu.	86,519	692,152	844,425.44	55,429	388,003	597,524.62
Oats.....bu.	26,482	820,942	541,821.72	28,950	839,550	621,267.00
Rye.....bu.	2,326	34,890	59,313.00	2,656	50,464	80,742.40
Barley.....bu.	20	400	400.00	13	364	389.48
Emmer ("speltz").....bu.						
Irish potatoes.....bu.	1,407	80,199	124,308.45	1,065	59,640	85,285.20
Sweet potatoes.....bu.	100	12,500	19,750.00	33	2,640	5,095.20
Cowpeas.....tons	45	56	896.00	74	111	1,831.50
Flax.....bu.				20	80	260.00
Broom corn.....lbs.	124	55,800	8,370.00	182	54,600	6,279.00
Millet.....tons	636	1,272	13,992.00	304	532	6,384.00
Sugar beets.....tons				1	6	57.00
Sorghum for syrup.....gals.	81	4,860	3,402.00	223	6,690	7,359.00
for seed.....bu.	1,801	25,214	40,846.68	4,415	48,565	92,273.50
for hay.....tons	3,831	10,536	73,752.00	4,279	16,046	112,322.00
Milo for grain.....bu.	119	2,142	2,677.50	207	2,484	3,850.20
for stover*.....tons		297	891.00		518	2,072.00
for hay.....tons				5	15	82.50
Kafir for grain.....bu.	35,594	533,910	768,830.40	42,413	466,543	723,141.65
for stover*.....tons		88,985	622,895.00		137,842	689,210.00
for hay.....tons	290	1,015	5,075.00	312	1,014	6,591.00
Feterita for grain.....bu.	383	6,511	8,464.30	417	5,338	9,048.90
for stover*.....tons		1,149	3,447.00		1,147	4,588.00
for hay.....tons	123	492	2,952.00	244	793	4,758.00
Sudan grass.....tons	346	865	7,785.00	669	2,174	21,740.00
Jerusalem corn.....tons				4	13	84.50
Alfalfa.....tons	37,213	111,639	1,897,863.00	38,007	104,519	2,090,380.00
Timothy.....tons	11			12		
Clover.....tons	125			45		
Blue grass.....tons	379			2		
Sweet clover.....tons	2,575	† 4,500	67,500.00	2,079	‡ 2,100	39,900.00
Orchard grass.....tons	21			6		
Other tame grasses.....tons	7					
Prairie hay.....tons	17,624	17,624	229,112.00	18,358	18,358	293,728.00
Totals.....	276,089		\$7,356,984.25	283,010		\$8,809,684.65

Corn on hand March 1, 1917, 97,494 bushels; March 1, 1918, 99,055 bushels.

Wheat on hand March 1, 1917, 25,609 bushels; March 1, 1918, 82,443 bushels.

Prairie grass for pasture March 1, 1918: Acres fenced 252,056; acres not fenced, 1,080.

* Forage after harvesting grain. † Product of 1916. ‡ Product of 1917.

SUMMARY.—COWLEY COUNTY.

Showing quantity and value of farm products in the county for 1917 and 1918.

Products.	1917.		1918.	
	Quantity.	Value.	Quantity.	Value.
Field crops.....acres	276,089	\$7,356,984.25	283,010	\$8,809,684.65
Animals slaughtered or sold for slaughter.....		1,826,911.00		2,146,082.00
Poultry and eggs sold.....		193,359.00		201,940.00
Wool clip.....lbs.	5,301	1,484.28	4,731	2,554.74
Cheese.....lbs.	4,485	762.45	960	172.80
Butter.....lbs.	3,119,811	1,019,952.78	4,239,578	1,772,396.25
Condensed milk.....lbs.				
Milk sold.....		219,269.00		310,991.00
Honey and beeswax.....lbs.	35,521	6,403.78	18,534	4,634.75
Wood marketed.....		727.00		1,083.00
Totals.....		\$10,625,853.54		\$13,249,539.19

Number of cream separators March 1, 1917, 1,455; March 1, 1918, 1,421.

Number of silos March 1, 1917, 230; March 1, 1918, 257.

Number of tractors March 1, 1917, 98; March 1, 1918, 70.

CRAWFORD COUNTY.

Organized in 1867; area, 377,104 acres; population, 60,866; rank in population, 3; assessed valuation, \$48,809,130; miles of railroad, main track, 170.97; county seat, Girard; population, 3,341.

POPULATION AND VALUATION.—CRAWFORD COUNTY.

Table showing total population, by townships and cities, for 1917 and 1918, and the assessed valuation of the municipal townships and cities of 1918.

Townships (and cities).	Population.		Assessed valuation of property, 1918.				
	1917.	1918.	Land.	City lots.	Personal.	Railroad, etc.	Total.
The county.....	62,406	60,866	\$14,856,485	\$13,080,935	\$11,425,270	\$9,446,440	\$48,809,130
Chicopee.....	257	241					
Litchfield.....	40	77					
Midway.....	50	87					
Opolis.....	171	158					
Pittsburg.....	19,169	18,048		\$8,320,290	\$3,749,955	\$1,707,001	\$13,777,246
Baker tp.....	4,024	3,637	\$1,732,190	303,325	654,535	1,757,393	4,447,443
Girard.....	3,208	3,341		1,486,975	820,015	201,378	2,508,368
Crawford tp.....	1,367	1,371	1,555,740	5,355	483,480	869,891	2,914,496
Grant tp.....		851	1,057,505	1,060	301,910	48,453	1,408,928
Arcadia.....	1,108	1,274		194,490	187,630	79,390	461,510
Englevale.....	179	189					
Gross.....	710	850	5,013				
Lincoln tp.....	3,103	2,700	1,690,780	77,605	700,360	741,070	3,209,815
McCune.....	584	570		205,515	202,950	27,165	435,630
Osage tp.....	1,111	1,695	1,376,835	1,970	505,590	213,571	2,097,966
Beulah.....	61	50					
Cherokee.....	1,230	1,294		319,005	208,445	135,675	663,125
Monmouth.....	79	68					
Sheridan tp.....	1,634	1,624	2,092,730	38,470	620,260	734,939	3,486,399
Farlington.....	114	133					
Sherman tp.....	912	897	1,325,085	13,915	590,720	325,349	2,255,069
Brazilton.....	63	69					
Hapler.....	204	212		78,785	89,990	67,650	236,425
Walnut.....	601	622	1,861	191,380	277,080	168,130	636,590
Walnut tp.....	960	958	1,406,845	15,615	427,420	641,851	2,491,731
Arma.....	1,975	2,173		343,275	110,610	44,753	498,638
Breezy Hill.....	910	610					
Capaldo.....	424	562					
Croweburg.....	513	645					
Curranville.....	243	366					
Dunkirk.....	1,119	507					
Edison.....	604	370	17,237				
Franklin.....	1,800	1,679					
Mulberry.....	2,868	2,682		468,615	240,505	26,588	735,708
Radley.....	2,086	1,274					
Ringo.....	609	819					
Yale.....	174	463					
Washington tp.....	4,072	5,087	2,618,775	622,645	1,091,965	1,519,066	5,852,451
Frontenac.....	3,219	3,155		392,615	161,850	137,127	691,592

LIVESTOCK.—CRAWFORD COUNTY.

Table showing number, value and mortality of livestock in the county for 1917 and 1918.

Livestock.	1917.		1918.		Mortality.	
	Number.	Value.	Number.	Value.	1917.	1918.
Horses.....	12,115	\$1,453,800.00	12,023	\$1,334,553.00	426	331
Mules and asses.....	3,470	468,450.00	3,118	436,520.00	48	44
Milk cows.....	8,168	612,600.00	8,129	666,578.00	210	244
Other cattle.....	13,521	676,050.00	15,043	812,322.00	424	556
Sheep.....	2,149	23,639.00	2,781	34,762.50	157	320
Swine.....	10,289	210,924.50	12,605	283,612.50	824	742
Totals.....	49,712	\$3,445,463.50	53,699	\$3,568,348.00	2,089	2,237

Number of dogs in county March 1, 1917, 1,546; March 1, 1918, 2,509.

Number of sheep killed by dogs, year ending March 1, 1917, 72; March 1, 1918, 40.

Number of sheep killed by wolves, year ending March 1, 1917, 57; March 1, 1918, 60.

Mortality of swine from cholera, year ending March 1, 1917, 500; March 1, 1918, 248.

FARM AND CROP STATISTICS.—CRAWFORD COUNTY.

Table showing acres, product and value of field crops in the county for 1917 and 1918.

Crops.	1917.			1918.		
	Acres.	Product.	Value.	Acres.	Product.	Value.
Winter wheat.....bu.	30,473	426,622	\$853,244.00	50,170	852,890	\$1,722,837.80
Spring wheat.....bu.	102	1,326	2,572.44			
Corn.....bu.	58,530	1,463,250	1,565,677.50	58,972	294,860	442,290.00
Oats.....bu.	35,385	1,273,860	713,361.60	41,628	1,040,700	728,490.00
Rye.....bu.	1	14	23.80	34	510	836.40
Barley.....bu.						
Emmer ("speltz").....bu.				1	24	18.00
Irish potatoes.....bu.	296	23,976	38,361.60	781	17,182	25,257.54
Sweet potatoes.....bu.	19	1,197	1,915.20	181	5,973	10,452.75
Cowpeas.....tons	155	194	3,104.00	145	218	3,597.00
Flax.....bu.	1,924	15,392	41,558.40	1,052	5,260	17,095.00
Broom corn.....lbs.	20	9,500	1,330.00	16	4,800	528.00
Millet.....tons	193	386	3,860.00	253	380	4,180.00
Sugar beets.....tons						
Sorghum for syrup.....gals.	65	5,200	3,640.00	187	9,350	10,285.00
for seed.....bu.	89	1,335	2,002.50	160	2,080	3,952.00
for hay.....tons	1,509	4,150	24,900.00	1,653	4,546	40,914.00
Milo for grain.....bu.	83	1,660	1,992.00	12	120	180.00
for stover*.....tons		249	996.00		24	120.00
for hay.....tons	9	27	162.00	39	98	637.00
Kafir for grain.....bu.	4,224	101,376	131,788.80	3,649	29,192	43,788.00
for stover*.....tons		8,448	42,240.00		7,298	36,490.00
for hay.....tons	520	1,040	7,280.00	537	1,074	6,981.00
Feterita for grain.....bu.	119	1,428	1,856.40	45	450	675.00
for stover*.....tons		298	1,192.00		68	340.00
for hay.....tons	74	222	1,110.00	10	20	140.00
Sudan grass.....tons	53	106	848.00	111	222	2,220.00
Jerusalem grass.....tons				2	4	26.00
Alfalfa.....tons	771	2,390	43,020.00	1,249	3,435	85,875.00
Timothy.....tons	5,814			5,840		
Clover.....tons	454			413		
Blue grass.....tons	3,792			2,364		
Sweet clover.....tons	20	† 9,007	153,119.00	24	‡ 8,506	195,638.00
Orchard grass.....tons	26			86		
Other tame grasses.....tons	292			208		
Prairie hay.....tons	12,157	12,157	170,198.00	14,819	7,410	163,020.00
Totals.....	157,169		\$3,811,353.24	184,641		\$3,546,863.49

Corn on hand March 1, 1917, 51,520 bushels; March 1, 1918, 242,756 bushels.

Wheat on hand March 1, 1917, 6,100 bushels; March 1, 1918, 10,631 bushels.

Prairie grass for pasture March 1, 1918: Acres fenced, 52,381; acres not fenced, 317.

* Forage after harvesting grain. † Product of 1916. ‡ Product of 1917.

SUMMARY.—CRAWFORD COUNTY.

Showing quantity and value of farm products in the county for 1917 and 1918.

Products.	1917.		1918.	
	Quantity.	Value.	Quantity.	Value.
Field crops.....acres	157,169	\$3,811,353.24	184,641	\$3,546,863.49
Animals slaughtered or sold for slaughter.....		368,651.00		580,844.00
Poultry and eggs sold.....		156,697.00		178,184.00
Wool clip.....lbs.	8,031	2,248.68	9,423	5,088.42
Cheese.....lbs.	140	23.80	20	3.60
Butter.....lbs.	372,182	116,131.29	353,005	141,990.99
Condensed milk.....lbs.				
Milk sold.....		56,534.00		84,507.00
Honey and beeswax.....lbs.	22,568	4,073.04	6,178	1,680.95
Wood marketed.....		507.00		1,076.00
Totals.....		\$4,516,219.05		\$4,540,238.45

Number of cream separators March 1, 1917, 816; March 1, 1918, 1,081.

Number of silos March 1, 1917, 50; March 1, 1918, 68.

Number of tractors March 1, 1917, 9; March 1, 1918, 38.

DECATUR COUNTY.

Organized in 1880; area, 573,683 acres; population, 8,023; rank in population, 73; assessed valuation, \$14,374,700; miles of railroad, main track, 56.54; county seat, Oberlin; population, 1,231.

POPULATION AND VALUATION.—DECATUR COUNTY.

Table showing total population, by townships and cities, for 1917 and 1918, and the assessed valuation of the municipal townships and cities of 1918.

Townships (and cities).	Population.		Assessed valuation of property, 1918.				
	1917.	1918.	Land.	City lots.	Personal.	Railroad, etc.	Total.
The county.....	8,333	8,023	\$7,805,160	\$859,740	\$3,666,210	\$2,043,590	\$14,374,700
Allison tp.....	243	250	\$324,450		\$127,760	\$649	\$452,859
Altory tp.....	241	206	311,550	\$5,940	154,740	158,489	630,719
Bassetville tp....	190	185	261,720		78,060	978	340,758
Cedar Bluffs.....	97	292	301,630	12,830	130,440	170,530	615,430
Beaver tp.....	195	298					
Center tp.....	228	243	341,850		82,980	171,271	596,101
Cook tp.....	191	183	313,200		69,020	441	382,661
Custer tp.....	192	174	318,720		52,090	1,075	371,885
Dresden.....	166	167					
Dresden tp.....	321	306	339,070	37,440	234,830	383,929	995,269
Finley tp.....	418	371	324,130	12,950	142,330	92,139	571,549
Kanona.....	63	65	313,870		85,710	25,077	424,657
Garfield tp.....	209	219					
Grant tp.....	289	289	342,590		155,540	665	498,795
Harlan tp.....	228	230	334,970		78,130	97	413,197
Jennings.....	242	220		83,700	145,620	35,999	265,319
Jennings tp.....	244	230	331,430		115,240	169,316	615,986
Liberty tp.....	225	196	340,010		79,100	1,158	420,268
Norcatour.....	501	436		167,440	256,860	35,712	460,012
Lincoln tp.....	247	253	340,400		83,210	106,918	530,528
Logan tp.....	226	197	286,390		108,580	66,374	461,344
Lyon tp.....	237	231	281,310		74,440	182,111	537,861
Oberlin.....	1,258	1,231		537,210	719,100	56,997	1,313,307
Oberlin tp.....	276	257	308,680		113,620	2,068	424,368
Olive tp.....	325	355	314,620		90,990	12,034	417,644
Pleasant Valley tp.	274	261	323,450	2,230	75,470	365,018	766,168
Prairie Dog tp....	194	180	316,070		80,940	1,067	398,077
Roosevelt tp.....	219	222	249,310		76,690	974	326,974
Sappa tp.....	214	196	298,080		75,270	1,420	374,770
Sherman tp.....	185	164	286,120		71,320	86	357,526
Summit tp.....	195	208	301,540		108,130	998	410,666

* Not reported separately from township in 1918.

LIVESTOCK.—DECATUR COUNTY.

Table showing number, value and mortality of livestock in the county for 1917 and 1918.

Livestock.	1917.		1918.		Mortality.	
	Number.	Value.	Number.	Value.	1917.	1918.
Horses.....	10,378	\$1,245,360.00	10,961	\$1,216,671.00	177	294
Mules and asses.....	1,783	240,705.00	1,406	196,840.00	12	15
Milk cows.....	5,459	409,425.00	6,382	523,324.00	114	86
Other cattle.....	16,400	820,000.00	15,477	835,758.00	307	353
Sheep.....	1,880	20,680.00	3,383	42,287.60	101	36
Swine.....	11,576	237,308.00	7,948	178,830.00	789	222
Totals.....	47,476	\$2,973,478.00	45,557	\$2,993,710.50	1,500	1,006

Number of dogs in county March 1, 1917, 987; March 1, 1918, 989.

Number of sheep killed by dogs, year ending March 1, 1917, 36; March 1, 1918, 2.

Number of sheep killed by wolves, year ending March 1, 1917, 15; March 1, 1918, 23.

Mortality of swine from cholera, year ending March 1, 1917, 645; March 1, 1918, 78.

FARM AND CROP STATISTICS.—DECATUR COUNTY.

Table showing acres, product and value of field crops in the county for 1917 and 1918.

Crops.	1917.			1918.		
	Acres.	Product.	Value.	Acres.	Product.	Value.
Winter wheat.....bu.	47,554	190,216	\$370,921.20	88,774	355,096	\$685,335.28
Spring wheat.....bu.				115	230	439.30
Corn.....bu.	119,260	477,040	505,662.40	92,947	278,841	382,012.17
Oats.....bu.	9,665	48,325	30,928.00	9,116	36,464	27,348.00
Rye.....bu.	680	3,400	5,950.00	937	5,622	9,276.30
Barley.....bu.	34,779	278,232	272,667.36	21,691	151,837	144,245.15
Emmer ("speltz").....bu.						
Irish potatoes.....bu.	516	9,288	14,396.40	619	17,951	26,028.95
Sweet potatoes.....bu.						
Cowpeas.....tons	25	31	496.00			
Flax.....bu.						
Broom corn.....lbs.	25	7,500	975.00	70	22,750	2,275.00
Millet.....tons	3,124	4,686	42,174.00	3,887	4,859	53,449.00
Sugar beets.....tons						
Sorghum for syrup.....gals.	88			213		
for seed.....bu.	1,631	9,786	14,679.00	3,515	31,635	58,524.75
for hay.....tons	18,184	27,276	190,932.00	23,118	40,457	364,113.00
Milo for grain.....bu.	3,351	20,106	25,132.50	4,173	33,384	48,072.96
for stover*.....tons		5,026	20,104.00		4,173	27,124.50
for hay.....tons	151	189	1,134.00	101	101	858.50
Kafir for grain.....bu.	11,093	44,372	66,558.00	11,580	34,740	57,321.00
for stover*.....tons		16,639	133,112.00		11,580	69,480.00
for hay.....tons	1,225	3,062	21,434.00	490	735	6,615.00
Feterita for grain.....bu.	2,778	11,112	16,668.00	1,590	12,720	19,080.00
for stover*.....tons		3,473	22,574.50		1,590	8,745.00
for hay.....tons	198	297	1,782.00	324	324	2,592.00
Sudan grass.....tons	383	766	7,660.00	1,061	1,592	17,512.00
Jerusalem corn.....tons	24	60	420.00	52	78	702.00
Alfalfa.....tons	3,576	8,225	131,600.00	3,038	6,836	129,884.00
Timothy.....tons	1					
Clover.....tons	1					
Blue grass.....tons						
Sweet clover.....tons	82	†		3	‡	
Orchard grass.....tons						
Other tame grasses.....tons						
Prairie hay.....tons	5,656	2,828	36,764.00	2,955	1,478	22,170.00
Totals.....	264,050		\$1,934,724.36	270,369		\$2,163,203.86

Corn on hand March 1, 1917, 77,079 bushels; March 1, 1918, 12,015 bushels.

Wheat on hand March 1, 1917, 121,578 bushels; March 1, 1918, 8,975 bushels.

Prairie grass for pasture March 1, 1918: Acres fenced, 210,329; acres not fenced, 20,325.

* Forage after harvesting grain. † Product of 1916. ‡ Product of 1917.

SUMMARY.—DECATUR COUNTY.

Showing quantity and value of farm products in the county for 1917 and 1918.

Products.	1917.		1918.	
	Quantity.	Value.	Quantity.	Value.
Field crops.....acres	264,050	\$1,934,724.36	270,369	\$2,163,203.86
Animals slaughtered or sold for slaughter.....		479,098.00		464,640.00
Poultry and eggs sold.....		121,656.00		124,457.00
Wool clip.....lbs.	1,674	468.72	6,114	3,301.56
Cheese.....lbs.	160	27.20	220	39.60
Butter.....lbs.	115,483	34,644.90	107,721	42,011.19
Condensed milk.....lbs.				
Milk sold.....		82,077.00		123,526.00
Honey and beeswax.....lbs.	693	126.24	85	21.25
Wood marketed.....		45.00		275.00
Totals.....		\$2,652,867.42		\$2,921,475.46

Number of cream separators March 1, 1917, 774; March 1, 1918, 873.

Number of silos March 1, 1917, 52; March 1, 1918, 64.

Number of tractors March 1, 1917, 17; March 1, 1918, 28.

DICKINSON COUNTY.

Organized in 1857; area, 542,155 acres; population, 26,112; rank in population, 15; assessed valuation, \$53,562,221; miles of railroad, main track, 153.96; county seat, Abilene; population, 4,465.

POPULATION AND VALUATION.—DICKINSON COUNTY.

Table showing total population, by townships and cities, for 1917 and 1918, and the assessed valuation of the municipal townships and cities of 1918.

Townships (and cities).	Population.		Assessed valuation of property, 1918.				
	1917.	1918.	Land.	City lots.	Personal.	Railroad, etc.	Total.
The county.....	26,058	26,112	\$26,398,062	\$6,150,195	\$13,747,910	\$7,266,054	\$53,562,221
Banner tp.....	574	529	\$990,084	\$31,386	\$477,199	\$181,757	\$1,680,426
Buckeye tp.....	656	702	1,236,566	31,880	520,655	202,688	1,991,789
Enterprise.....	790 1,613	837 1,571	2,236,566	390,088	411,306	77,039	878,433
Center tp.....	823 1,613	734 1,571	1,138,590	27,620	309,705	704,580	2,180,495
Cheever tp.....	521	568	1,098,668	4,950	319,418	3,856	1,426,892
Manchester.....	260 687	225 872	99,490	87,990	51,060	238,540	
Flora tp.....	427 687	647 872	969,365	306,576	379,355	1,655,296	
Fragrant Hill tp.....	507	496	946,184	506,366	5,194	1,457,744	
Garfield tp.....	541	522	1,126,676	434,059	181	1,560,916	
Abilene.....	4,455 5,373	4,465 5,321	2,970,927	1,974,867	310,224	5,256,018	
Grant tp.....	918 5,373	856 5,321	1,677,328	41,657	549,969	825,493	3,094,447
Hayes tp.....	556	559	974,299	339,588	15,522	1,329,409	
Holland tp.....	477	454	817,240	40,887	242,986	265,505	1,366,618
Hope.....	621 1,132	570 1,064	1,144,550	228,639	289,405	30,082	548,126
Hope tp.....	511 1,132	494 1,064	1,144,550	4,231	405,453	361,382	1,915,616
Jefferson tp.....	588	604	1,105,180	4,260	405,782	97,100	1,612,122
Woodbine.....	317 832	335 868	95,850	266,688	18,022	380,560	
Liberty tp.....	515 832	536 868	1,368,252	4,560	623,997	205,083	2,201,892
Solomon.....	1,013 1,409	983 1,378	399,570	437,927	153,134	990,631	
Lincoln tp.....	396 1,409	395 1,378	1,225,657	314,426	747,620	2,287,703	
Logan tp.....	602	635	1,152,485	41,080	537,454	327,780	2,058,799
Herington.....	4,791 5,353	4,738 5,263	680,953	1,310,800	343,923	2,335,676	
Lyon tp.....	562 5,353	525 5,263	965,318	8,540	360,416	907,135	2,241,409
Newbern tp.....	593	609	1,079,250	436,636	4,489	1,520,375	
Chapman.....	815 1,212	824 1,246	386,400	333,803	52,050	772,253	
Noble tp.....	397 1,212	422 1,246	1,022,530	275,357	317,375	1,615,262	
Ridge tp.....	555	568	1,108,596	303,265	380,754	1,799,290	
Rinehart tp.....	466	455	1,135,570	385,033	304	1,520,907	
Sherman tp.....	469	467	908,036	252,379	1,131	1,161,546	
Union tp.....	432	459	1,093,361	320,707	214,819	1,628,887	
Wheatland tp.....	413	432	1,044,727	307,300	1,699	1,353,726	
Willowdale tp.....	497	470	1,069,550	20,905	330,245	79,718	1,500,418

LIVESTOCK.—DICKINSON COUNTY.

Table showing number, value and mortality of livestock in the county for 1917 and 1918.

Livestock.	1917.		1918.		Mortality.	
	Number.	Value.	Number.	Value.	1917.	1918.
Horses.....	16,281	\$1,953,720.00	16,294	\$1,808,634.00	116	266
Mules and asses.....	4,628	624,780.00	2,837	397,180.00	7	17
Milk cows.....	10,369	777,675.00	12,168	997,776.00	91	216
Other cattle.....	39,034	1,951,700.00	38,936	2,102,544.00	443	939
Sheep.....	2,949	32,439.00	3,923	49,037.50	39	146
Swine.....	27,292	559,486.00	31,118	700,155.00	498	749
Totals.....	100,553	\$5,899,800.00	105,276	\$6,055,326.50	1,194	2,333

Number of dogs in county March 1, 1917, 1,845; March 1, 1918, 2,089.

Number of sheep killed by dogs, year ending March 1, 1917, 1; March 1, 1918, 35.

Number of sheep killed by wolves, year ending March 1, 1918, 4.

Mortality of swine from cholera, year ending March 1, 1917, 206; March 1, 1918, 385.

FARM AND CROP STATISTICS.—DICKINSON COUNTY.

Table showing acres, product and value of field crops in the county for 1917 and 1918.

Crops.	1917.			1918.		
	Acres.	Product.	Value.	Acres.	Product.	Value.
Winter wheat.....bu.	107,716	1,508,024	\$3,091,449.20	135,789	2,444,202	\$4,888,404.00
Spring wheat.....bu.				14	196	388.08
Corn.....bu.	109,153	2,183,060	2,466,857.80	86,011	516,066	774,099.00
Oats.....bu.	45,962	1,516,746	925,215.06	38,671	928,104	696,078.00
Rye.....bu.	1,328	19,920	32,270.40	1,584	22,176	34,816.32
Barley.....bu.	121	3,025	3,025.00	233	5,825	6,116.25
Emmer ("speltz").....bu.				1	22	17.60
Irish potatoes.....bu.	1,037	60,146	84,204.40	1,042	26,050	41,680.00
Sweet potatoes.....bu.	75	5,400	9,180.00	69	4,485	8,970.00
Cowpeas.....tons	2	2	32.00			
Flax.....bu.						
Broom corn.....lbs.	9	2,700	378.00			
Millet.....tons	506	1,139	8,542.50	347	521	5,731.00
Sugar beets.....tons				6	36	342.00
Sorghum for syrup.....gals.	23	1,150	805.00	23	1,150	1,265.00
for seed.....bu.	388	5,044	9,079.20	595	5,950	11,007.50
for hay.....tons	2,329	6,987	48,909.00	2,387	4,774	38,192.00
Milo for grain.....bu.	58	928	1,160.00	315	3,150	5,197.50
for stover*.....tons		145	435.00		473	2,365.00
for hay.....tons	15	38	228.00	9	14	98.00
Kafir for grain.....bu.	5,004	65,052	85,868.64	3,398	33,980	56,067.00
for stover*.....tons		16,263	65,052.00		7,646	53,522.00
for hay.....tons	492	1,476	10,332.00	364	819	6,961.50
Feterita for grain.....bu.	336	3,360	4,200.00	337	4,718	7,077.00
for stover*.....tons		840	3,360.00		753	3,790.00
for hay.....tons	39	97	582.00	113	226	1,582.00
Sudan grass.....tons	208	884	8,840.00	911	2,050	22,550.00
Jerusalem corn.....tons	7	21	147.00	4	9	76.50
Alfalfa.....tons	28,032	86,899	1,477,283.00	29,719	66,868	1,337,360.00
Timothy.....tons	8					
Clover.....tons	42			4		
Blue grass.....tons	50			61		
Sweet clover.....tons	67			182	250	5,000.00
Orchard grass.....tons	37					
Other tame grasses.....tons	64					
Prairie hay.....tons	17,326	17,326	225,238.00	16,603	12,452	199,232.00
Totals.....	320,434		\$8,562,673.20	318,792		\$8,207,985.25

Corn on hand March 1, 1917, 306,710 bushels; March 1, 1918, 508,834 bushels.

Wheat on hand March 1, 1917, 105,183 bushels; March 1, 1918, 138,863 bushels.

Prairie grass for pasture March 1, 1918: Acres fenced, 138,810; acres not fenced, 476.

* Forage after harvesting grain. † Product of 1916. ‡ Product of 1917.

SUMMARY.—DICKINSON COUNTY.

Showing quantity and value of farm products in the county for 1917 and 1918.

Products.	1917.		1918.	
	Quantity.	Value.	Quantity.	Value.
Field crops.....acres	320,434	\$8,562,673.20	318,792	\$8,207,985.25
Animals slaughtered or sold for slaughter.....		1,404,559.00		2,023,282.20
Poultry and eggs sold.....		300,483.00		324,188.00
Wool clip.....lbs.	5,670	1,587.60	16,091	8,689.14
Cheese.....lbs.	160	27.20	50	9.00
Butter.....lbs.	2,086,466	681,340.53	2,482,059	1,036,598.16
Condensed milk.....lbs.	109,163	6,549.78	672,960	60,431.81
Milk sold.....		231,309.00		380,339.00
Honey and beeswax.....lbs.	33,533	6,099.74	14,176	3,550.50
Wood marketed.....		882.00		774.00
Totals.....		\$11,195,511.05		\$12,045,846.86

Number of cream separators March 1, 1917, 1,411; March 1, 1918, 1,472.

Number of silos March 1, 1917, 252; March 1, 1918, 304.

Number of tractors March 1, 1917, 99; March 1, 1918, 135.

DONIPHAN COUNTY.

Organized in 1855; area, 248,870 acres; population, 16,616; rank in population, 36; assessed valuation, \$30,754,745; miles of railroad, main track, 98.10; county seat, Troy; population, 1,287.

POPULATION AND VALUATION.—DONIPHAN COUNTY.

Table showing total population, by townships and cities, for 1917 and 1918, and the assessed valuation of the municipal townships and cities of 1918.

Townships (and cities).	Population.		Assessed valuation of property, 1918.				
	1917.	1918.	Land.	City lots.	Personal.	Railroad, etc.	Total.
The county.....	15,879	16,616	\$17,191,261	\$1,641,805	\$8,678,305	\$3,243,374	\$30,754,745
Burr Oak tp.....	937	774	\$804,085		\$352,240	\$2,730	\$1,159,055
Troy.....	1,215	1,287		\$454,275	608,505	94,848	1,157,628
Center tp.....	2,110	2,389	2,592,969	4,935	905,970	707,889	4,211,763
Highland.....	766	877		374,880	437,030	13,716	825,626
White Cloud.....	615	750		125,120	221,375	30,032	376,527
Iowa tp.....	2,249	1,816	3,544,057	12,950	1,311,980	430,843	5,299,830
Marion tp.....	695	824	603,573	26,625	197,135	1,493	828,826
Denton.....	206	253		55,380	152,475	25,471	233,326
Union tp.....	791	721	2,217,423	13,890	704,890	303,952	3,240,155
Elwood.....	815	867		113,395	29,665	60,823	203,883
Wathena.....	795	759		271,525	265,280	66,366	603,171
Washington tp.....	1,407	1,672	1,371,206		1,148,610	621,872	3,141,688
Wayne tp.....	1,397	1,445	1,981,264	20,260	761,215	196,224	2,958,963
Severance.....	337	277		103,110	256,220	19,277	378,607
Leona.....	135	2,182					
Wolf River tp.....	1,409	1,905	4,076,684	65,460	1,325,715	667,838	6,135,697

* Not reported separately from township in 1918.

LIVESTOCK.—DONIPHAN COUNTY.

Table showing number, value and mortality of livestock in the county for 1917 and 1918.

Livestock.	1917.		1918.		Mortality.	
	Number.	Value.	Number.	Value.	1917.	1918.
Horses.....	6,324	\$758,880.00	6,343	\$704,073.00	96	170
Mules and asses.....	3,274	441,990.00	3,423	479,220.00	19	38
Milk cows.....	4,563	342,225.00	4,728	387,696.00	90	139
Other cattle.....	12,563	628,150.00	11,693	631,422.00	200	366
Sheep.....	6,236	68,596.00	6,510	81,375.00	170	193
Swine.....	23,126	474,083.00	26,149	588,352.50	2,001	3,377
Totals.....	56,086	\$2,713,924.00	58,846	\$2,872,138.50	2,576	4,283

Number of dogs in county March 1, 1917, 1,453; March 1, 1918, 1,420.

Number of sheep killed by dogs, year ending March 1, 1917, 106; March 1, 1918, 21.

Number of sheep killed by wolves, year ending March 1, 1917, 17; March 1, 1918, 20.

Mortality of swine from cholera, year ending March 1, 1917, 1,162; March 1, 1918, 2,574.

FARM AND CROP STATISTICS.—DONIPHAN COUNTY.

Table showing acres, product and value of field crops in the county for 1917 and 1918.

Crops.	1917.			1918.		
	Acres.	Product.	Value.	Acres.	Product.	Value.
Winter wheat.....bu.	16,684	333,680	\$667,360.00	31,608	600,552	\$1,243,142.64
Spring wheat.....bu.						
Corn.....bu.	69,768	2,581,416	3,123,513.36	63,074	1,198,406	1,617,848.10
Oats.....bu.	17,514	735,588	419,285.16	16,501	429,026	296,027.94
Rye.....bu.	61	1,098	1,866.60	134	2,278	3,599.24
Barley.....bu.	34	1,088	1,098.88	163	4,075	4,278.75
Emmer ("speltz").....bu.				13	312	230.88
Irish potatoes.....bu.	1,364	87,296	125,706.24	1,248	39,936	58,306.56
Sweet potatoes.....bu.	12	876	1,462.92	12	888	1,776.00
Cowpeas.....tons	6	7	112.00	9	14	231.00
Flax.....bu.				10	60	195.00
Broom corn.....lbs.	21	5,250	735.00			
Millet.....tons	1	2	20.00	4	8	88.00
Sugar beets.....tons						
Sorghum for syrup.....gals.	42	2,940	2,058.00	13	910	1,001.00
for seed.....bu.				8	120	222.00
for hay.....tons	2	6	48.00	46	138	1,242.00
Milo for grain.....bu.				1	15	23.25
for stover*.....tons					3	18.00
for hay.....tons	3	9	63.00			
Kafir for grain.....bu.	34	340	510.00	13	325	520.00
for stover*.....tons		85	340.00		52	416.00
for hay.....tons	2	8	56.00	5	20	200.00
Feterita for grain.....bu.						
for stover*.....tons						
for hay.....tons	2	6	42.00			
Sudan grass.....tons				3	8	88.00
Jerusalem corn.....tons						
Alfalfa.....tons	11,136	36,749	734,980.00	12,735	35,021	840,504.00
Timothy.....tons	6,104			5,311		
Clover.....tons	12,520			14,106		
Blue grass.....tons	16,233	† 27,002	472,535.00	16,848	‡ 13,909	278,180.00
Sweet clover.....tons						
Orchard grass.....tons	880			685		
Other tame grasses.....tons	150			125		
Prairie hay.....tons	7,286	7,286	116,576.00	5,915	5,915	106,470.00
Totals.....	159,859		\$5,668,368.16	168,590		\$4,454,608.36

Corn on hand March 1, 1917, 416,958 bushels; March 1, 1918, 860,740 bushels.

Wheat on hand March 1, 1917, 26,055 bushels; March 1, 1918, 28,720 bushels.

Prairie grass for pasture March 1, 1918: Acres fenced, 16,300; acres not fenced, 410.

* Forage after harvesting grain. † Product of 1916. ‡ Product of 1917.

SUMMARY.—DONIPHAN COUNTY.

Showing quantity and value of farm products in the county for 1917 and 1918.

Products.	1917.		1918.	
	Quantity.	Value.	Quantity.	Value.
Field crops.....acres	159,859	\$5,668,368.16	168,590	\$4,454,608.36
Animals slaughtered or sold for slaughter.....		1,278,759.00		2,283,015.00
Poultry and eggs sold.....		108,076.00		109,174.00
Wool clip.....lbs.	8,803	2,464.84	13,656	7,374.24
Cheese.....lbs.				
Butter.....lbs.	152,981	45,894.30	152,253	59,378.67
Condensed milk.....lbs.				
Milk sold.....		38,241.00		42,114.00
Honey and beeswax.....lbs.	18,424	3,448.52	9,616	2,405.50
Wood marketed.....		4,522.00		6,173.00
Totals.....		\$7,149,773.82		\$6,964,242.77

Number of cream separators March 1, 1917, 193; March 1, 1918, 210.

Number of silos March 1, 1917, 33; March 1, 1918, 30.

Number of tractors March 1, 1917, 14; March 1, 1918, 20.

DOUGLAS COUNTY.

Organized in 1855; area, 298,888 acres; population, 25,087; rank in population, 18; assessed valuation, \$41,777,665; miles of railroad, main track, 54.92; county seat, Lawrence; population, 13,456.

POPULATION AND VALUATION.—DOUGLAS COUNTY.

Table showing total population, by townships and cities, for 1917 and 1918, and the assessed valuation of the municipal townships and cities of 1918.

Townships (and cities).	Population.		Assessed valuation of property, 1918.				
	1917.	1918.	Land.	City lots.	Personal.	Railroad, etc.	Total.
The county	25,052	25,087	\$17,452,906	\$10,017,100	\$9,733,140	\$4,574,519	\$41,777,665
Clinton tp.	778	785	\$1,293,342	\$8,280	\$331,940	\$22,703	\$1,656,265
Eudora	625	636	.....	301,315	245,725	45,189	592,229
Eudora tp.	987	1,064	2,317,478	.....	501,945	423,153	3,242,581
Grant tp.	468	475	927,177	.....	246,170	751,989	1,925,336
Kanwaka tp.	787	797	1,303,208	.....	347,820	102,230	1,753,258
Lecompton	321	295	.....	111,615	69,140	95,909	276,664
Lecompton tp.	659	581	988,488	445	216,885	690,024	1,895,842
Marion tp.	1,099	1,098	2,137,218	.....	750,810	361	2,888,389
Baldwin	1,162	1,073	.....	735,885	396,070	38,239	1,170,194
Palmyra tp.	1,584	1,478	2,965,695	15,500	797,455	614,220	4,392,870
Wakarusa tp.	2,156	2,318	3,713,478	80,780	832,280	1,102,845	5,729,383
Willow Springs tp.	1,025	1,031	1,806,822	.....	568,835	227	2,375,884
Lawrence:							
First ward.	3,246	*					
Second ward.	3,488	*					
Third ward.	3,637	*					
Fourth ward.	1,151	*					
Fifth ward.	1,054	*					
Sixth ward.	825	*					
		13,456	.....	8,763,280	4,428,065	687,425	13,878,770

* Not available by wards for 1918.

LIVESTOCK.—DOUGLAS COUNTY.

Table showing number, value and mortality of livestock in the county for 1917 and 1918.

Livestock.	1917.		1918.		Mortality.	
	Number.	Value.	Number.	Value.	1917.	1918.
Horses	11,433	\$1,371,960.00	9,988	\$1,108,668.00	207	190
Mules and asses	1,724	232,740.00	1,493	209,020.00	16	15
Milk cows	8,560	642,000.00	9,314	763,748.00	183	169
Other cattle	16,843	842,150.00	17,178	927,612.00	409	485
Sheep	2,668	29,348.00	3,051	38,137.50	159	57
Swine	15,223	312,071.50	22,015	495,337.50	350	379
Totals	56,451	\$3,430,269.50	63,039	\$3,542,523.00	1,324	1,295

Number of dogs in county March 1, 1917, 1,975; March 1, 1918, 1,898.

Number of sheep killed by dogs, year ending March 1, 1917, 20; March 1, 1918, 8.

Number of sheep killed by wolves, year ending March 1, 1917, 6; March 1, 1918, 6.

Mortality of swine from cholera, year ending March 1, 1917, 146; March 1, 1918, 80.

FARM AND CROP STATISTICS.—DOUGLAS COUNTY.

Table showing acres, product and value of field crops in the county for 1917 and 1918.

Crops.	1917.			1918.		
	Acres.	Product.	Value.	Acres.	Product.	Value.
Winter wheat.....bu.	31,286	625,720	\$1,332,783.60	52,209	1,254,016	\$2,568,682.80
Spring wheat.....bu.	6	108	223.56			
Corn.....bu.	55,926	1,118,520	1,263,927.60	44,823	627,522	909,906.90
Oats.....bu.	23,729	972,889	564,275.62	19,746	612,126	410,124.42
Rye.....bu.	611	10,998	18,806.58	825	17,325	27,373.50
Barley.....bu.	18	450	454.50	2	54	55.08
Emmer ("speltz").....bu.						
Irish potatoes.....bu.	1,255	94,125	117,656.25	1,541	123,280	143,004.80
Sweet potatoes.....bu.	99	9,900	11,385.00	58	4,582	8,018.50
Cowpeas.....tons	50	62	992.00	11	17	280.50
Flax.....bu.	609	4,872	13,154.40	233	1,631	5,300.75
Broom corn.....lbs						
Millet.....tons	225	450	4,500.00	153	306	3,366.00
Sugar beets.....tons	60	600	3,300.00	2	12	114.00
Sorghum for syrup.....gals.	24	1,680	1,176.00	135	8,775	9,652.50
for seed.....bu.	28	420	630.00	84	1,092	1,965.60
for hay.....tons	867	3,035	18,210.00	881	3,304	21,476.00
Milo for grain.....bu.	25	375	525.00	33	396	633.60
for stover*.....tons		87	348.00		99	495.00
for hay.....tons				1	3	21.00
Kafir for grain.....bu.	3,914	58,710	93,936.00	2,518	40,288	64,460.80
for stover*.....tons		12,720	76,320.00		7,554	45,324.00
for hay.....tons	263	789	4,734.00	130	423	3,384.00
Feterita for grain.....bu.	122	2,196	2,854.80	121	1,815	2,958.45
for stover*.....tons		488	1,952.00		363	1,815.00
for hay.....tons	35	105	630.00	80	280	1,960.00
Sudan grass.....tons	50	150	1,200.00	44	110	1,100.00
Jerusalem corn.....tons	40	120	720.00	4	13	104.00
Alfalfa.....tons	11,180	38,012	760,240.00	14,548	36,370	800,140.00
Timothy.....tons	6,316			5,790		
Clover.....tons	4,620			2,649		
Blue grass.....tons	3,830	† 21,759	369,903.00	4,832	† 10,423	229,306.00
Sweet clover.....tons	101			78		
Orchard grass.....tons	34			18		
Other tame grasses.....tons	96			411		
Prairie hay.....tons	10,527	10,527	157,905.00	10,486	7,865	141,570.00
Totals.....	155,946		\$4,822,742.91	162,446		\$5,402,593.20

Corn on hand March 1, 1917, 58,102 bushels; March 1, 1918, 260,673 bushels.

Wheat on hand March 1, 1917, 6,676 bushels; March 1, 1918, 10,834 bushels.

Prairie grass for pasture March 1, 1918: Acres fenced, 58,419; acres not fenced, 2,317.

* Forage after harvesting grain. † Product of 1916. ‡ Product of 1917.

SUMMARY.—DOUGLAS COUNTY.

Showing quantity and value of farm products in the county for 1917 and 1918.

Products.	1917.		1918	
	Quantity.	Value.	Quantity.	Value.
Field crops.....acres	155,946	\$4,822,742.91	162,446	\$5,402,593.20
Animals slaughtered or sold for slaughter.....		656,489.00		1,010,229.00
Poultry and eggs sold.....		163,469.00		197,424.00
Wool clip.....lbs.	11,880	3,326.40	9,201	4,968.54
Cheese.....lbs.	25	4.25		
Butter.....lbs.	347,245	106,192.14	268,438	106,637.10
Condensed milk.....lbs.				
Milk sold.....		216,528.00		282,526.00
Honey and beeswax.....lbs.	29,566	5,400.88	4,540	1,136.35
Wood marketed.....		3,729.00		10,839.00
Totals.....		\$5,977,881.58		\$7,016,353.19

Number of cream separators March 1, 1917, 1,054; March 1, 1918, 1,067.

Number of silos March 1, 1917, 201; March 1, 1918, 212.

Number of tractors March 1, 1917, 28; March 1, 1918, 54.

EDWARDS COUNTY.

Organized in 1874; area, 396,366 acres; population, 6,865; rank in population, 77; assessed valuation, \$18,844,807; miles of railroad, main track, 78.78; county seat, Kinsley; population, 1,804.

POPULATION AND VALUATION.—EDWARDS COUNTY.

Table showing total population, by townships and cities, for 1917 and 1918, and the assessed valuation of the municipal townships and cities of 1918.

Townships (and cities).	Population.		Assessed valuation of property, 1918.				
	1917.	1918.	Land.	City lots.	Personal.	Railroad, etc.	Total.
The county	7,095	6,865	\$10,382,650	\$1,248,270	\$5,114,111	\$2,099,776	\$18,844,807
Belpre	380	315	.....	\$111,630	\$218,737	\$37,006	\$367,373
Belpre tp	370	356	\$1,264,932	.....	251,437	393,493	1,909,862
Franklin tp	609	588	1,241,259	17,052	608,478	33,239	1,900,028
Jackson tp	402	391	1,124,993	.....	279,308	1,231	1,405,532
Kinsley	1,952	1,804	.....	868,892	1,071,763	168,825	2,109,480
Kinsley tp	413	424	994,382	1,309	271,784	550,304	1,817,779
Lincoln tp	695	704	1,213,739	27,763	612,454	73,439	1,927,395
Logan tp	248	225	567,925	.....	176,715	494	745,134
North Brown tp ..	300	318	789,817	.....	206,284	28,855	1,024,956
South Brown tp ..	569	576	1,249,772	9,530	491,514	52,496	1,803,312
Offerle	162	172	.....	66,310	194,114	35,323	295,747
Trenton tp	252	247	951,007	.....	192,839	311,277	1,455,123
Lewis	391	357	.....	145,784	328,639	30,130	504,553
Wayne tp	352	388	984,824	.....	210,045	383,664	1,578,533

LIVESTOCK.—EDWARDS COUNTY.

Table showing number, value and mortality of livestock in the county for 1917 and 1918.

Livestock.	1917.		1918.		Mortality.	
	Number.	Value.	Number.	Value.	1917.	1918.
Horses	7,142	\$857,040.00	7,228	\$802,308.00	111	399
Mules and asses	2,665	359,775.00	2,345	328,300.00	15	41
Milk cows	2,361	177,075.00	2,784	228,288.00	28	102
Other cattle	10,005	500,250.00	10,980	592,920.00	120	470
Sheep	230	2,530.00	207	2,587.50	.....	7
Swine	3,843	78,781.50	5,242	117,945.00	156	204
Totals	26,246	\$1,975,451.50	28,786	\$2,072,348.50	430	1,223

Number of dogs in county March 1, 1917, 423; March 1, 1918, 568.

Number of sheep killed by dogs, year ending March 1, 1918, 4.

Mortality of swine from cholera, year ending March 1, 1917, 106; March 1, 1918, 5.

FARM AND CROP STATISTICS.—EDWARDS COUNTY.

Table showing acres, product and value of field crops in the county for 1917 and 1918.

Crops.	1917.			1918.		
	Acres.	Product.	Value.	Acres.	Product.	Value.
Winter wheat.....bu.	12,851	64,255	\$129,152.55	122,403	856,821	\$1,679,369.16
Spring wheat.....bu.						
Corn.....bu.	168,367	1,852,037	2,185,403.66	76,825	307,300	439,439.00
Oats.....bu.	16,909	101,454	74,061.42	9,862	69,034	51,065.16
Rye.....bu.	743	5,944	10,223.68	1,319	7,914	12,662.40
Barley.....bu.	13,132	131,320	131,320.00	4,651	32,557	32,557.00
Emmer ("speltz").....bu.						
Irish potatoes.....bu.						
Sweet potatoes.....bu.						
Cowpeas.....tons				10	15	247.50
Flax.....bu.						
Broom corn.....lbs.						
Millet.....tons	100	125	1,125.00	228	171	1,881.00
Sugar beets.....tons						
Sorghum for syrup.....gals.				20		
for seed.....bu.	31	372	632.40	555	2,775	5,272.50
for hay.....tons	3,320	5,810	34,860.00	5,729	7,161	71,610.00
Milo for grain.....bu.	1,797	17,970	26,955.00	2,243	20,187	30,280.50
for stover*.....tons		1,797	8,985.00		2,243	16,822.50
for hay.....tons				80	80	720.00
Kafir for grain.....bu.	12,430	124,300	182,721.00	8,195	40,975	61,462.50
for stover*.....tons		21,751	108,755.00		10,244	71,708.00
for hay.....tons	1,413	2,826	21,195.00	1,889	2,834	14,089.00
Feterita for grain.....bu.	1,916	26,824	42,918.40	1,432	14,320	21,480.00
for stover*.....tons		2,874	14,370.00		1,432	9,308.00
for hay.....tons	84	168	1,176.00	218	218	1,962.00
Sudan grass.....tons	351	790	6,320.00	1,001	1,251	13,761.00
Jerusalem corn.....tons				9	14	119.00
Alfalfa.....tons	2,738	7,666	130,322.00	2,851	5,702	119,742.00
Timothy.....tons						
Clover.....tons						
Blue grass.....tons						
Sweet clover.....tons	11	†		19	†	
Orchard grass.....tons						
Other tame grasses.....tons						
Prairie hay.....tons	2,675	1,337	16,044.00	1,809	905	15,385.00
Totals.....	238,868		\$3,126,540.11	241,348		\$2,670,963.22

Corn on hand March 1, 1917, 41,886 bushels; March 1, 1918, 378,101 bushels.

Wheat on hand March 1, 1917, 168,857 bushels; March 1, 1918, 10,902 bushels.

Prairie grass for pasture March 1, 1918: Acres fenced, 82,838; acres not fenced, 2,252.

* Forage after harvesting grain. † Product of 1916. ‡ Product of 1917.

SUMMARY.—EDWARDS COUNTY.

Showing quantity and value of farm products in the county for 1917 and 1918.

Products.	1917.		1918.	
	Quantity.	Value.	Quantity.	Value.
Field crops.....acres	238,868	\$3,126,540.11	241,348	\$2,670,963.22
Animals slaughtered or sold for slaughter.....		191,510.00		208,399.00
Poultry and eggs sold.....		60,342.00		56,788.00
Wool clip.....lbs.				
Cheese.....lbs.	200	34.00		
Butter.....lbs.	93,063	27,918.90	80,486	31,389.54
Condensed milk.....lbs.				
Milk sold.....		25,123.00		32,832.00
Honey and beeswax.....lbs.	40	7.20	1,435	358.75
Wood marketed.....				50.00
Totals.....		\$3,431,475.21		\$3,000,780.51

Number of cream separators March 1, 1917, 395; March 1, 1918, 444.

Number of silos March 1, 1917, 58; March 1, 1918, 77.

Number of tractors March 1, 1917, 39; March 1, 1918, 59.

ELK COUNTY.

Organized in 1875; area, 415,238 acres; population, 10,202; rank in population, 65; assessed valuation, \$18,468,416; miles of railroad, main track, 63.86; county seat, Howard; population, 1,086.

POPULATION AND VALUATION.—ELK COUNTY.

Table showing total population, by townships and cities, for 1917 and 1918, and the assessed valuation of the municipal townships and cities of 1918.

Townships (and cities).	Population.		Assessed valuation of property, 1918.				
	1917.	1918.	Land.	City lots.	Personal.	Railroad, etc.	Total.
The county.....	10,294	10,202	\$8,672,279	\$1,245,905	\$4,169,774	\$4,380,458	\$18,468,416
Elk Falls.....	309	335		\$56,960	\$51,085	\$29,645	\$137,690
Elk Falls tp.....	632	618	\$755,769		265,065	477,454	1,498,288
Grenola.....	567	558		199,495	186,160	35,731	421,386
Greenfield tp.....	583	584	939,393		321,285	409,496	1,670,174
Howard.....	1,118	1,086		481,600	416,700	49,872	948,172
Howard tp.....	750	788	1,217,912	7,310	395,070	327,778	1,948,070
Liberty tp.....		540	607,269	2,465	195,310	512,030	1,317,074
Longton.....	658	664		201,110	246,385	117,392	564,887
Logan tp.....	469	491	529,250		353,200	263,810	1,146,260
Oak Valley.....	248	*					
Oak Valley tp.....	425	637	555,020	13,555	254,970	531,485	1,355,030
Painterhood tp.....		393	581,950		163,463	69,707	815,120
Paw Paw tp.....		832	882,623		280,723	649,271	1,812,617
Union Center tp.....		949	1,805,482		349,668	533,355	2,688,505
Moline.....	986	926		270,860	406,895	74,536	752,291
Wild Cat tp.....	798	752	797,611	12,550	283,795	298,896	1,392,852

* Not reported separately from township in 1918.

LIVESTOCK.—ELK COUNTY.

Table showing number, value and mortality of livestock in the county for 1917 and 1918.

Livestock.	1917.		1918.		Mortality.	
	Number.	Value.	Number.	Value.	1917.	1918.
Horses.....	7,394	\$887,280.00	7,594	\$842,934.00	67	43
Mules and asses.....	2,224	300,240.00	1,648	230,720.00	11	3
Milk cows.....	3,833	287,475.00	6,583	539,806.00	61	47
Other cattle.....	24,567	1,228,350.00	22,556	1,218,024.00	277	272
Sheep.....	597	6,567.00	766	9,575.00	10	2
Swine.....	11,957	245,118.50	11,802	265,545.00	972	86
Totals.....	50,572	\$2,955,030.50	50,949	\$3,106,604.00	1,398	453

Number of dogs in county March 1, 1917, 1,042; March 1, 1918, 1,149.

Number of sheep killed by dogs, year ending March 1, 1918, 2.

Number of sheep killed by wolves, year ending March 1, 1918, 4.

Mortality of swine from cholera, year ending March 1, 1917, 865; March 1, 1918, 29.

FARM AND CROP STATISTICS.—ELK COUNTY.

Table showing acres, product and value of field crops in the county for 1917 and 1918.

Crops.	1917.			1918.		
	Acres.	Product.	Value.	Acres.	Product.	Value.
Winter wheat.....bu.	3,914	74,366	\$153,937.62	13,257	251,883	\$503,766.00
Spring wheat.....bu.						
Corn.....bu.	48,353	580,236	707,887.92	32,697	130,788	202,721.40
Oats.....bu.	6,533	202,523	127,589.49	13,769	385,532	289,149.00
Rye.....bu.	375	6,750	11,610.00	742	11,130	17,919.30
Barley.....bu.	32	640	640.00	76	1,520	1,596.00
Emmer ("speltz").....bu.				1	26	20.80
Irish potatoes.....bu.	418	27,170	40,755.00	486	24,300	37,179.00
Sweet potatoes.....bu.	3	249	358.56	5	390	748.80
Cowpeas.....tons	6	7	112.00	19	29	478.50
Flax.....bu.	386	2,316	6,253.20	1,666	6,664	21,658.00
Broom corn.....lbs.	45	20,250	3,037.50	10	3,000	300.00
Millet.....tons	199	299	2,990.00	80	120	1,320.00
Sugar beets.....tons						
Sorghum for syrup.....gals.	124	8,060	5,642.00	203	7,105	7,815.50
for seed.....bu.	1,268	12,680	19,654.00	2,463	22,167	41,673.96
for hay.....tons	1,862	4,655	37,240.00	2,386	5,965	44,737.50
Milo for grain.....bu.	789	11,835	14,793.75	1,476	14,760	23,616.00
for stover*.....tons		237	948.00		3,690	16,605.00
for hay.....tons	3	9	49.50	55	151	906.00
Kafir for grain.....bu.	21,274	234,014	320,599.18	18,862	113,172	175,416.60
for stover*.....tons		53,185	319,110.00		51,871	259,355.00
for hay.....tons	271	881	5,286.00	271	673	4,407.00
Feterita for grain.....bu.	290	5,800	7,250.00	305	3,355	5,032.50
for stover*.....tons		870	4,350.00		839	4,195.00
for hay.....tons	19	57	342.00	80	240	1,680.00
Sudan grass.....tons	25	75	750.00	58	116	1,218.00
Jerusalem corn.....tons	50	162	972.00	4	10	65.00
Alfalfa.....tons	14,474	43,422	781,596.00	17,135	47,121	942,420.00
Timothy.....tons	181			119		
Clover.....tons	238			384		
Blue grass.....tons	216			176		
Sweet clover.....tons	704	† 2,600	39,000.00	1,379	‡ 2,000	40,000.00
Orchard grass.....tons	20			205		
Other tame grasses.....tons	1,055			661		
Prairie hay.....tons	38,761	29,070	436,050.00	23,738	11,869	189,904.00
Totals.....	141,888		\$3,048,803.72	132,768		\$2,835,903.86

Corn on hand March 1, 1917, 18,660 bushels; March 1, 1918, 33,001 bushels.

Wheat on hand March 1, 1917, 920 bushels; March 1, 1918, 737 bushels.

Prairie grass for pasture March 1, 1918: Acres fenced, 161,318; acres not fenced, 90.

* Forage after harvesting grain. † Product of 1916. ‡ Product of 1917.

SUMMARY.—ELK COUNTY.

Showing quantity and value of farm products in the county for 1917 and 1918.

Products.	1917.		1918.	
	Quantity.	Value.	Quantity.	Value.
Field crops.....acres	141,888	\$3,048,803.72	132,768	\$2,835,903.86
Animals slaughtered or sold for slaughter.....		1,033,829.00		1,508,524.00
Poultry and eggs sold.....		117,409.00		114,294.00
Wool clip.....lbs.	493	138.04	2,275	1,228.50
Cheese.....lbs.				
Butter.....lbs.	349,929	110,886.24	294,524	119,642.46
Condensed milk.....lbs.				
Milk sold.....		97,410.00		126,833.00
Honey and beeswax.....lbs.	14,311	2,604.78	19,714	4,930.75
Wood marketed.....		878.00		683.00
Totals.....		\$4,411,958.78		\$4,712,039.57

Number of cream separators March 1, 1917, 706; March 1, 1918, 767.

Number of silos March 1, 1917, 135; March 1, 1918, 119.

Number of tractors March 1, 1917, 21; March 1, 1918, 22.

ELLSWORTH COUNTY.

Organized in 1867; area, 461,042 acres; population, 10,138; rank in population, 66; assessed valuation, \$29,579,062; miles of railroad, main track, 88.22; county seat, Ellsworth; population, 1,897.

POPULATION AND VALUATION.—ELLSWORTH COUNTY.

Table showing total population, by townships and cities, for 1917 and 1918, and the assessed valuation of the municipal townships and cities of 1918.

Townships (and cities).	Population.		Assessed valuation of property, 1918.				
	1917.	1918.	Land.	City lots.	Personal.	Railroad, etc.	Total.
The county	10,625	10,138	\$16,345,230	\$2,289,320	\$7,465,990	\$3,478,522	\$29,579,062
Ash Creek tp.	191	180	\$625,500		\$145,430	\$86,082	\$857,012
Black Wolf tp.	329	338	847,500		334,180	403,293	1,584,973
Carneiro tp.	191	297	540,950	\$10,800	240,990	364,269	1,157,009
Clear Creek tp.	453	444	851,230		164,190	341,987	1,357,407
Columbia tp.	371	367	1,168,010		251,790	2,914	1,422,714
Ellsworth	2,044	1,897		1,113,040	1,573,960	174,204	2,861,204
Kanopolis	742	758		251,140	145,940	69,219	466,299
Ellsworth tp.	375	352	1,115,940		278,410	239,765	1,634,115
Empire tp.	372	350	1,318,600		391,800	65,976	1,776,376
Garfield tp.	199	207	508,700		248,550	1,496	758,746
Lorraine	224	171					
Green Garden tp. .	325	496	1,282,940	63,790	361,820	425,249	2,133,799
Langley tp.	433	293	551,870	9,980	199,260	253,187	1,014,297
Lincoln tp.	357	212	662,000		220,450	183,341	1,065,791
Mulberry tp.	174	176	491,200		312,070	1,306	804,576
Noble tp.	405	392	764,900		162,910	91,041	1,018,851
Palacky tp.	376	389	915,100		245,810	3,170	1,164,080
Sherman tp.	350	377	860,500		209,100	1,912	1,071,512
Thomas tp.	226	230	837,400		169,480	314,366	1,321,246
Trivoli tp.	267	246	658,260		184,880	15,002	858,142
Holyrood	420	459		203,430	419,740	35,188	658,358
Valley tp.	315	336	1,185,310		232,170	75,707	1,493,187
Wilson	1,055	942		626,580	752,870	67,484	1,446,934
Wilson tp.	431	400	1,159,320	10,560	220,190	262,364	1,652,434

LIVESTOCK.—ELLSWORTH COUNTY.

Table showing number, value and mortality of livestock in the county for 1917 and 1918.

Livestock.	1917.		1918.		Mortality.	
	Number.	Value.	Number.	Value.	1917.	1918.
Horses	10,011	\$1,201,320.00	9,928	\$1,102,008.00	208	231
Mules and asses	1,983	267,705.00	1,599	223,860.00	24	21
Milk cows	3,751	281,325.00	4,801	393,682.00	65	75
Other cattle	27,359	1,367,950.00	26,931	1,454,274.00	413	573
Sheep	247	2,717.00	291	3,637.50	6	3
Swine	7,196	147,518.00	6,568	147,780.00	222	274
Totals	50,547	\$3,268,535.00	50,118	\$3,325,241.50	938	1,177

Number of dogs in county March 1, 1917, 1,124; March 1, 1918, 1,272.

Number of sheep killed by wolves, year ending March 1, 1918, 2.

Mortality of swine from cholera, year ending March 1, 1917, 104; March 1, 1918, 267.

FARM AND CROP STATISTICS.—ELLSWORTH COUNTY.

Table showing acres, product and value of field crops in the county for 1917 and 1918.

Crops.	1917.			1918.		
	Acres.	Product.	Value.	Acres.	Product.	Value.
Winter wheat.....bu.	27,683	138,415	\$279,598.30	67,456	876,928	\$1,736,317.44
Spring wheat.....bu.				50	550	1,028.00
Corn.....bu.	109,535	328,605	354,893.40	68,702	274,808	392,975.44
Oats.....bu.	21,637	194,733	128,523.78	24,626	566,398	419,134.52
Rye.....bu.	836	3,344	5,517.60	1,875	28,125	44,156.25
Barley.....bu.	5,347	53,470	52,935.30	10,048	180,864	180,864.00
Emmer ("speltz").....bu.						
Irish potatoes.....bu.	823	18,929	28,393.50	838	19,274	29,874.70
Sweet potatoes.....bu.	2	106	159.00			
Cowpeas.....tons	10	12	192.00	1	2	33.00
Flax.....bu.						
Broom corn.....lbs.						
Millet.....tons	359	539	5,390.00	311	544	6,528.00
Sugar beets.....tons						
Sorghum for syrup.....gals.				22	550	605.00
for seed.....bu.	1,144	5,720	9,724.00	2,822	28,220	53,618.00
for hay.....tons	12,722	31,805	222,635.00	8,759	17,518	122,626.00
Milo for grain.....bu.	1,233	7,398	11,097.00	2,540	25,400	40,640.00
for stover*.....tons		2,466	13,563.00		5,080	30,480.00
for hay.....tons	4	10	65.00	11	22	154.00
Kafir for grain.....bu.	17,090	34,180	51,270.00	15,198	151,980	243,168.00
for stover*.....tons		42,725	256,350.00		34,196	205,176.00
for hay.....tons	887	2,439	15,853.50	641	1,442	11,536.00
Feterita for grain.....bu.	1,350	10,800	12,420.00	2,407	36,105	55,962.75
for stover*.....tons		3,713	18,565.00		5,416	27,080.00
for hay.....tons	14	42	336.00	227	624	4,680.00
Sudan grass.....tons	109	218	1,962.00	654	1,799	17,990.00
Jerusalem corn.....tons				30	68	544.00
Alfalfa.....tons	8,144	21,989	395,802.00	8,649	21,623	432,460.00
Timothy.....tons						
Clover.....tons						
Blue grass.....tons						
Sweet clover.....tons	10	†		47	‡	
Orchard grass.....tons						
Other tame grasses.....tons	49			‡		
Prairie hay.....tons	6,710	6,710	93,940.00	7,261	5,446	81,690.00
Totals.....	215,698		\$1,959,185.38	223,179		\$4,139,321.10

Corn on hand March 1, 1917, 70,843 bushels; March 1, 1918, 74,032 bushels.

Wheat on hand March 1, 1917, 65,639 bushels; March 1, 1918, 34,072 bushels.

Prairie grass for pasture March 1, 1918: Acres fenced, 180,616; acres not fenced, 3,535.

* Forage after harvesting grain. † Product of 1916. ‡ Product of 1917.

SUMMARY.—ELLSWORTH COUNTY.

Showing quantity and value of farm products in the county for 1917 and 1918.

Products.	1917.		1918.	
	Quantity.	Value.	Quantity.	Value.
Field crops.....acres	215,698	\$1,959,185.38	223,179	\$4,139,321.10
Animals slaughtered or sold for slaughter.....		1,164,100.00		1,480,919.00
Poultry and eggs sold.....		123,930.00		124,541.00
Wool clip.....lbs.	567	158.76	1,200	648.00
Cheese.....lbs.	10	1.70		
Butter.....lbs.	157,816	47,344.80	133,370	52,014.30
Condensed milk.....lbs.				
Milk sold.....		63,614.00		115,861.00
Honey and beeswax.....lbs.	145	26.10	465	116.25
Wood marketed.....		194.00		392.00
Totals.....		\$3,358,554.74		\$5,913,812.65

Number of cream separators March 1, 1917, 791; March 1, 1918, 789.

Number of silos March 1, 1917, 74; March 1, 1918, 73.

Number of tractors March 1, 1917, 44; March 1, 1918, 43.

ELLIS COUNTY.

Organized in 1867; area, 575,653 acres; population, 13,843; rank in population, 50; assessed valuation, \$22,046,282; miles of railroad, main track, 31.78; county seat, Hays; population, 3,006.

POPULATION AND VALUATION.—ELLIS COUNTY.

Table showing total population, by townships and cities, for 1917 and 1918, and the assessed valuation of the municipal townships and cities of 1918.

Townships (and cities).	Population.		Assessed valuation of property, 1918.				
	1917.	1918.	Land.	City lots.	Personal.	Railroad, etc.	Total.
The county.....	14,331	13,843	\$12,260,848	\$2,367,228	\$5,490,539	\$1,927,667	\$22,046,282
Hays.....	3,069	3,006	.....	\$1,524,355	\$1,329,916	\$109,681	\$2,963,952
Big Creek tp.....	566	542	\$1,084,023	.....	181,110	461,826	1,726,959
Buckeye tp.....	540	630	1,106,963	.....	229,055	2,060	1,338,078
Catherine tp.....	736	702	632,942	.....	157,431	1,933	820,636
Ellis.....	1,787	1,707	.....	587,201	838,045	344,482	1,769,728
Ellis tp.....	839	839	1,132,195	.....	228,153	229,548	1,589,896
Freedom tp.....	553	495	653,704	17,030	161,866	475	833,075
Hamilton tp.....	637	564	734,469	.....	258,294	1,430	994,193
Herzog tp.....	620	640	587,198	1,405	137,162	17,328	743,093
Lookout tp.....	805	724	763,435	25,670	210,093	3,530	1,002,728
Pleasant Hill tp...	530	475	882,222	.....	272,881	310,734	1,465,837
Riverview tp.....	*	350	570,434	.....	159,949	1,803	732,186
Saline tp.....	635	441	804,668	.....	246,089	670	1,051,427
Smoky Hill tp....	389	389	585,677	.....	122,090	1,098	708,865
Victoria.....	564	342	.....	126,060	250,071	14,949	391,080
Victoria tp.....	549	520	642,558	.....	144,079	222,041	1,008,678
Walker tp.....	774	737	1,220,997	27,257	338,501	200,676	1,787,431
Wheatland tp.....	740	740	859,363	29,920	225,754	3,403	1,118,440

* Organized in 1917.

LIVESTOCK.—ELLIS COUNTY.

Table showing number, value and mortality of livestock in the county for 1917 and 1918.

Livestock.	1917.		1918.		Mortality.	
	Number.	Value.	Number.	Value.	1917.	1918.
Horses.....	13,973	\$1,676,760.00	14,188	\$1,574,868.00	533	688
Mules and asses.....	1,283	173,205.00	1,041	145,740.00	11	18
Milk cows.....	4,751	356,325.00	5,653	463,546.00	195	261
Other cattle.....	22,714	1,135,700.00	20,341	1,098,414.00	791	1,121
Sheep.....	1,808	19,888.00	888	11,100.00	16	88
Swine.....	5,549	113,754.50	5,890	132,525.00	566	668
Totals.....	50,078	\$3,475,632.50	48,001	\$3,426,193.00	2,112	2,844

Number of dogs in county March 1, 1917, 1,483; March 1, 1918, 1,461.

Number of sheep killed by dogs, year ending March 1, 1917, 2; March 1, 1918, 23.

Mortality of swine from cholera, year ending March 1, 1917, 195; March 1, 1918, 98.

FARM AND CROP STATISTICS.—ELLIS COUNTY.

Table showing acres, product and value of field crops in the county for 1917 and 1918.

Crops.	1917.			1918.		
	Acres.	Product.	Value.	Acres.	Product.	Value.
Winter wheat.....bu.	16,478	32,956	\$69,207.60	158,579	1,427,211	\$2,711,700.90
Spring wheat.....bu.	4					
Corn.....bu.	115,281	230,562	272,063.16	33,206	66,412	99,618.00
Oats.....bu.	12,073			10,657	117,227	91,437.06
Rye.....bu.	331			519	4,152	6,850.80
Barley.....bu.	25,010			12,655	151,860	151,860.00
Emmer ("speltz").....bu.						
Irish potatoes.....bu.	418	5,434	8,694.40	531	6,903	10,699.65
Sweet potatoes.....bu.				1	30	67.50
Cowpeas.....tons				12	18	297.00
Flax.....bu.						
Broom corn.....lbs.						
Millet.....tons	2,134	2,134	21,340.00	1,505	1,129	13,548.00
Sugar beets.....tons						
Sorghum for syrup.....gals.				10		
for seed.....bu.	631	3,786	6,057.60	3,078	9,234	17,544.60
for hay.....tons	24,288	18,216	182,160.00	13,736	17,170	154,530.00
Milo for grain.....bu.	4,728	23,640	35,460.00	4,908	39,264	62,822.40
for stover*.....tons		3,546	17,730.00		4,908	29,448.00
for hay.....tons	25	19	152.00	139	139	1,042.50
Kafir for grain.....bu.	25,217	75,651	113,476.50	21,038	63,114	100,982.40
for stover*.....tons		25,217	176,519.00		21,038	147,266.00
for hay.....tons	3,594	3,594	28,752.00	2,350	2,938	24,973.00
Feterita for grain.....bu.	7,113	49,791	74,686.50	4,260	29,820	47,712.00
for stover*.....tons		3,557	21,342.00		4,260	17,040.00
for hay.....tons	165	83	664.00	367	367	2,569.00
Sudan grass.....tons	159	119	1,190.00	1,257	1,886	20,746.00
Jerusalem corn.....tons				21	26	221.00
Alfalfa.....tons	2,250	3,375	60,750.00	2,354	4,120	82,400.00
Timothy.....tons						
Clover.....tons						
Blue grass.....tons						
Sweet clover.....tons	7	†			†	
Orchard grass.....tons						
Other tame grasses.....tons	2					
Prairie hay.....tons	5,362	4,021	56,294.00	4,061	4,061	60,915.00
Totals.....	245,270		\$1,146,538.76	275,244		\$3,856,290.81

Corn on hand March 1, 1917, 11,745 bushels; March 1, 1918, 12,113 bushels.

Wheat on hand March 1, 1917, 151,005 bushels; March 1, 1918, 24,252 bushels.

Prairie grass for pasture March 1, 1918: Acres fenced, 213,706; acres not fenced, 5,259.

* Forage after harvesting grain. † Product of 1916. ‡ Product of 1917.

SUMMARY.—ELLIS COUNTY.

Showing quantity and value of farm products in the county for 1917 and 1918.

Products.	1917.		1918.	
	Quantity.	Value.	Quantity.	Value.
Field crops.....acres	245,270	\$1,146,538.76	275,244	\$3,856,290.81
Animals slaughtered or sold for slaughter.....		306,877.00		350,264.00
Poultry and eggs sold.....		81,722.00		81,303.00
Wool clip.....lbs.	138	38.64	9,024	4,872.96
Cheese.....lbs.	195	33.15		
Butter.....lbs.	93,593	28,137.90	97,094	37,866.66
Condensed milk.....lbs.				
Milk sold.....		52,685.00		76,638.00
Honey and beeswax.....lbs.				
Wood marketed.....				79.00
Totals.....		\$1,616,032.45		\$4,407,314.43

Number of cream separators March 1, 1917, 795; March 1, 1918, 797.

Number of silos March 1, 1917, 29; March 1, 1918, 47.

Number of tractors March 1, 1917, 131; March 1, 1918, 103.

FINNEY COUNTY.

Organized in 1884; area, 832,096 acres; population, 7,434; rank in population, 74; assessed valuation, \$18,311,255; miles of railroad, main track, 61.82; county seat, Garden City; population, 3,504.

POPULATION AND VALUATION.—FINNEY COUNTY.

Table showing total population, by townships and cities, for 1917 and 1918, and the assessed valuation of the municipal townships and cities of 1918.

Townships (and cities).	Population.		Assessed valuation of property, 1918.				
	1917.	1918.	Land.	City lots.	Personal.	Railroad, etc.	Total.
The county.....	7,317	7,434	\$9,835,435	\$1,976,920	\$4,463,229	\$2,035,671	\$18,311,255
Garden City.....	3,382	3,504		\$1,888,035	\$1,387,040	\$179,470	\$3,454,545
Garden City tp....	753	758	\$2,443,155	17,280	708,127	659,899	3,828,461
Garfield tp.....	736	714	2,220,220	2,430	665,735	1,387	2,889,772
Ivanhoe tp.....	453	421	712,120	2,400	266,385		980,905
Pierceville tp....	503	461	831,695	13,325	238,825	388,636	1,472,481
Pleasant Valley tp.	107	162	907,775		161,435		1,069,210
Sherlock tp.....	1,130	1,136	1,743,290	42,295	737,828	614,091	3,137,504
Terry tp.....	253	278	977,180	11,155	297,854	192,188	1,478,377

LIVESTOCK.—FINNEY COUNTY.

Table showing number, value and mortality of livestock in the county for 1917 and 1918.

Livestock.	1917.		1918.		Mortality.	
	Number.	Value.	Number.	Value.	1917.	1918.
Horses.....	5,986	\$718,320.00	6,671	\$740,481.00	130	128
Mules and asses.....	1,841	248,535.00	1,564	218,960.00	28	12
Milk cows.....	2,484	186,300.00	3,365	275,930.00	43	57
Other cattle.....	28,012	1,400,600.00	27,577	1,489,158.00	510	748
Sheep.....	1,466	16,126.00	506	6,325.00	67	2
Swine.....	5,591	114,615.50	4,357	98,032.50	692	207
Totals.....	45,380	\$2,684,496.50	44,040	\$2,828,886.50	1,470	1,154

Number of dogs in county March 1, 1917, 495; March 1, 1918, 573.

Number of sheep killed by wolves, year ending March 1, 1917, 4.

Mortality of swine from cholera, year ending March 1, 1917, 288; March 1, 1918, 18.

FARM AND CROP STATISTICS.—FINNEY COUNTY.

Table showing acres, product and value of field crops in the county for 1917 and 1918.

Crops.	1917.			1918.		
	Acres.	Product.	Value.	Acres.	Product.	Value.
Winter wheat.....bu.	4,989	44,901	\$92,945.07	11,830	141,960	\$276,822.00
Spring wheat.....bu.	105	420	844.20	163	815	1,572.95
Corn.....bu.	15,301	153,010	194,322.70	13,876	138,760	202,589.60
Oats.....bu.	8,073			5,527	71,851	53,888.25
Rye.....bu.	2,047	8,188	14,329.00	325	3,250	5,362.50
Barley.....bu.	10,464	31,392	31,705.92	6,955	125,190	118,930.50
Emmer ("speltz").....bu.	110			17	255	204.00
Irish potatoes.....bu.	77	3,619	6,338.25	92	4,140	6,210.00
Sweet potatoes.....bu.	36	4,320	7,041.60	20	2,540	5,715.00
Cowpeas.....tons	6	7	112.00	56	84	1,386.00
Flax.....bu.				2		
Broom corn.....lbs.	2,301	632,775	85,424.63	1,656	496,800	49,680.00
Millet.....tons	505	505	5,050.00	520	520	5,720.00
Sugar beets.....tons	8,672	86,720	563,680.00	7,064	56,512	565,120.00
Sorghum for syrup.....gals.				11	220	242.00
for seed.....bu.	2,075	20,750	32,162.50	8,176	106,288	191,318.40
for hay.....tons	16,957	33,914	305,226.00	12,103	18,155	190,627.50
Milo for grain.....bu.	24,482	293,784	411,297.60	22,488	337,320	505,980.00
for stover*.....tons		18,361	110,166.00		28,110	182,715.00
for hay.....tons	45	34	204.00	20	25	200.00
Kafir for grain.....bu.	13,830	124,470	174,258.00	12,802	153,624	238,117.20
for stover*.....tons		27,660	124,470.00		12,802	83,213.00
for hay.....tons	55	151	1,359.00	25	38	342.00
Peterita for grain.....bu.	3,882	42,702	61,063.86	4,577	59,501	89,251.50
for stover*.....tons		2,912	14,560.00		4,577	29,750.50
for hay.....tons	118	90	495.00	192	192	1,632.00
Sudan grass.....tons	488	732	8,418.00	1,686	3,794	39,837.00
Jerusalem corn.....tons	10	27	243.00	13	20	180.00
Alfalfa.....tons	16,032	49,699	993,980.00	13,935	38,321	766,420.00
Timothy.....tons						
Clover.....tons						
Blue grass.....tons						
Sweet clover.....tons	1,285	† 1,895	32,215.00	350	‡ 400	7,200.00
Orchard grass.....tons						
Other tame grasses.....tons						
Prairie hay.....tons	1,260	1,260	17,640.00	2,128	1,596	23,940.00
Totals.....	133,205		\$3,289,546.33	126,609		\$3,644,166.90

Corn on hand March 1, 1917, 1,965 bushels; March 1, 1918, 3,940 bushels.

Wheat on hand March 1, 1917, 475 bushels; March 1, 1918, 434 bushels.

Prairie grass for pasture March 1, 1918: Acres fenced, 389,513; acres not fenced, 12,611.

* Forage after harvesting grain. † Product of 1916. ‡ Product of 1917.

SUMMARY.—FINNEY COUNTY.

Showing quantity and value of farm products in the county for 1917 and 1918.

Products.	1917.		1918.	
	Quantity.	Value.	Quantity.	Value.
Field crops.....acres	133,205	\$3,289,546.33	126,609	\$3,644,166.90
Animals slaughtered or sold for slaughter.....		569,053.00		585,575.00
Poultry and eggs sold.....		31,282.00		32,405.00
Wool clip.....lbs.	4,800	1,344.00	1,840	993.60
Cheese.....lbs.				
Butter.....lbs.	102,412	31,323.60	68,121	26,567.19
Condensed milk.....lbs.				
Milk sold.....		33,146.00		50,160.00
Honey and beeswax.....lbs.	28,094	5,067.32	21,356	5,348.00
Wood marketed.....				
Totals.....		\$3,960,762.25		\$4,345,215.69

Number of cream separators March 1, 1917, 271; March 1, 1918, 346.

Number of silos March 1, 1917, 31; March 1, 1918, 54.

Number of tractors March 1, 1917, 22; March 1, 1918, 21.

FORD COUNTY.

Organized in 1873; area, 694,584 acres; population, 14,311; rank in population, 47; assessed valuation, \$29,291,592; miles of railroad, main track, 99.50; county seat, Dodge City; population, 4,800.

POPULATION AND VALUATION.—FORD COUNTY.

Table showing total population, by townships and cities, for 1917 and 1918. and the assessed valuation of the municipal townships and cities of 1918.

Townships (and cities).	Population.		Assessed valuation of property, 1918.				
	1917.	1918.	Land.	City lots.	Personal.	Railroad, etc.	Total.
The county.....	15,648	14,311	\$15,287,899	\$3,062,679	\$6,414,375	\$4,526,639	\$29,291,592
Bloom tp.	426	400	\$824,050	\$32,440	\$200,720	\$299,633	\$1,356,843
Bucklin.....	988} 1,270	801} 1,059	.....	360,925	399,145	74,746	834,846
Bucklin tp.	282}	258}	556,376	.....	148,020	111,135	815,531
Concord tp.	390	323	883,188	.....	171,340	.....	1,054,528
Dodge City.....	5,304} 6,075	4,800} 5,610	.....	2,290,945	1,982,955	378,068	4,651,968
Dodge tp.	771}	810}	652,751	43,175	152,285	641,238	1,489,449
Enterprise tp.	384	348	928,166	2,391	160,220	170,022	1,260,799
Fairview tp.	357	321	876,437	.....	178,170	471,814	1,526,421
Ford.....	339} 1,050	245} 921	.....	82,910	96,620	14,954	194,484
Ford tp.	711}	676}	1,440,689	.....	335,450	322,451	2,098,590
Grandview tp.	1,226	1,262	1,004,466	8,080	272,185	318,166	1,602,897
Pleasant Valley tp.	417	394	887,483	.....	237,235	182,001	1,306,719
Richland tp.	345	250	582,344	.....	89,355	88,002	759,701
Royal tp.	275	257	862,598	.....	139,185	4,856	1,006,639
Sodville tp.	473	422	872,814	17,023	254,960	427,349	1,572,146
Spearville.....	763} 1,935	703} 1,796	.....	219,430	435,715	93,955	749,100
Spearville tp.	1,172}	1,093}	2,722,033	.....	577,370	584,844	3,884,247
Wheatland tp.	627	590	1,199,697	5,330	391,150	342,604	1,938,781
Wilburn tp.	398	358	994,807	.....	192,295	801	1,187,903

LIVESTOCK.—FORD COUNTY.

Table showing number, value and mortality of livestock in the county for 1917 and 1918.

Livestock.	1917.		1918.		Mortality.	
	Number.	Value.	Number.	Value.	1917.	1918.
Horses.....	12,154	\$1,458,480.00	12,165	\$1,350,315.00	189	350
Mules and asses.....	3,342	451,170.00	2,573	360,220.00	15	34
Milk cows.....	4,531	339,825.00	5,412	443,784.00	60	138
Other cattle.....	20,542	1,027,100.00	14,645	790,830.00	487	678
Sheep.....	185	2,035.00	525	6,562.50	2	10
Swine.....	6,997	143,438.50	4,881	109,822.50	273	211
Totals.....	47,751	\$3,422,048.50	40,201	\$3,061,534.00	1,026	1,421

Number of dogs in county March 1, 1917, 1,069; March 1, 1918, 1,137.

Number of sheep killed by dogs, year ending March 1, 1917, 1; March 1, 1918, 4.

Mortality of swine from cholera, year ending March 1, 1917, 163; March 1, 1918, 22.

FARM AND CROP STATISTICS.—FORD COUNTY.

Table showing acres, product and value of field crops in the county for 1917 and 1918.

Crops.	1917.			1918.		
	Acres.	Product.	Value.	Acres.	Product.	Value.
Winter wheat.....bu.	25,419	127,095	\$270,712.35	28,426	85,278	\$168,850.44
Spring wheat.....bu.				10	30	58.50
Corn.....bu.	166,335	332,670	392,550.60	101,532	101,532	147,221.40
Oats.....bu.	44,884			67,650	67,650	52,767.00
Rye.....bu.	521			1,001	2,002	3,303.30
Barley.....bu.	39,323			40,966	81,932	81,932.00
Emmer ("speltz").....bu.				25		
Irish potatoes.....bu.	446	3,122	5,151.30	432		
Sweet potatoes.....bu.	2					
Cowpeas.....tons						
Flax.....bu.						
Broom corn.....lbs.	225	73,125	9,506.25	95	28,500	2,850.00
Millet.....tons	500	500	5,000.00	535	401	4,411.00
Sugar beets.....						
Sorghum for syrup.....gals.	290			15		
for seed.....bu.	725			6,002	12,004	21,967.32
for hay.....tons	15,268	15,268	122,144.00	17,148	17,148	171,480.00
Milo for grain.....bu.	9,709	38,836	66,021.20	28,845	115,380	173,070.00
for stover*.....tons		9,709	48,545.00		21,634	151,438.00
for hay.....tons	197	197	1,477.50	259	324	2,592.00
Kafir for grain.....bu.	44,744	223,720	349,003.20	44,188	88,376	136,982.80
for stover*.....tons		67,116	302,022.00		33,141	281,698.50
for hay.....tons	3,356	4,195	35,658.00	1,433	1,433	12,897.00
Peterita for grain.....bu.	10,646	53,230	84,103.40	15,711	62,844	94,266.00
for stover*.....tons		13,308	79,848.00		11,783	76,589.50
for hay.....tons	476	714	5,712.00	691	691	5,528.00
Sudan grass.....tons	443	886	8,860.00	3,226	3,226	38,712.00
Jerusalem corn.....tons	10	12	102.00	100	100	900.00
Alfalfa.....tons	5,393	14,561	262,098.00	3,919	7,838	156,760.00
Timothy.....tons						
Clover.....tons						
Blue grass.....tons						
Sweet clover.....tons	50	†			‡	
Orchard grass.....tons	10					
Other tame grasses.....tons						
Prairie hay.....tons	2,060	2,060	30,900.00	2,613	1,960	29,400.00
Totals.....	371,032		\$2,079,414.80	364,822		\$1,815,674.76

Corn on hand March 1, 1917, 56,386 bushels; March 1, 1918, 23,355 bushels.

Wheat on hand March 1, 1917, 172,236 bushels; March 1, 1918, 27,877 bushels.

Prairie grass for pasture March 1, 1918: Acres fenced, 264,764; acres not fenced, 13,105.

* Forage after harvesting grain. † Product of 1916. ‡ Product of 1917.

SUMMARY.—FORD COUNTY.

Showing quantity and value of farm products in the county for 1917 and 1918.

Products.	1917.		1918.	
	Quantity.	Value.	Quantity.	Value.
Field crops.....acres	371,032	\$2,079,414.80	364,822	\$1,815,674.76
Animals slaughtered or sold for slaughter.....		253,099.00		315,633.00
Poultry and eggs sold.....		94,392.00		79,287.00
Wool clip.....lbs.			190	102.60
Cheese.....lbs.	300	51.00	102	18.36
Butter.....lbs.	141,508	42,452.40	171,125	67,548.57
Condensed milk.....lbs.				
Milk sold.....		73,721.00		75,825.00
Honey and beeswax.....lbs.	4,120	741.60	3,001	750.25
Wood marketed.....				
Totals.....		\$2,543,871.80		\$2,354,839.54

Number of cream separators March 1, 1917, 613; March 1, 1918, 609.

Number of silos March 1, 1917, 61; March 1, 1918, 76.

Number of tractors March 1, 1917, 96; March 1, 1918, 125.

FRANKLIN COUNTY.

Organized in 1857; area, 365,945 acres; population, 23,300; rank in population, 21; assessed valuation, \$41,081,497; miles of railroad, main track, 101.25; county seat, Ottawa; population, 9,489.

POPULATION AND VALUATION.—FRANKLIN COUNTY.

Table showing total population, by townships and cities, for 1917 and 1918, and the assessed valuation of the municipal townships and cities of 1918.

Townships (and cities).	Population.		Assessed valuation of property, 1918.				
	1917.	1918.	Land.	City lots.	Personal.	Railroad, etc.	Total.
The county	22,605	23,300	\$18,233,823	\$6,040,690	\$9,384,681	\$7,422,303	\$41,081,497
Appanoose tp.....	697	573	\$847,742	.....	\$251,985	\$25	\$1,099,752
Centropolis tp.....	920	912	1,295,583	\$17,610	269,055	249,977	1,832,225
Rantoul.....	198	243	.....	71,800	75,645	37,465	184,910
Cutler tp.....	758	784	1,027	.....	541,605	267,040	1,901,784
Wellsville.....	812	867	.....	357,230	473,423	28,127	858,780
Franklin tp.....	712	819	1,476,831	17,635	683,295	756,218	2,933,979
Greenwood tp.....	601	597	751,626	.....	217,935	379,689	1,349,250
Harrison tp.....	579	582	1,160,325	8,180	256,480	385,316	1,810,301
Hayes tp.....	490	516	1,119,151	1,635	276,525	530,123	1,927,434
Homewood tp.....	670	667	918,430	.....	318,395	206,405	1,443,230
Lincoln tp.....	691	708	1,251,663	17,460	232,590	496,945	2,048,658
Ohio tp.....	825	819	1,299,322	58,470	333,085	498,618	2,239,495
Ottawa tp.....	1,195	1,192	1,836,951	.....	379,195	1,190,916	3,407,062
Peoria tp.....	736	741	1,018,668	12,730	922,860	167,855	2,122,113
Pomona.....	468	478	.....	165,590	127,025	449	293,064
Pomona tp.....	336	352	582,922	.....	188,505	506,261	1,277,688
Lane.....	335	337	.....	106,765	134,795	36,460	278,020
Pottawatomie tp..	614	618	1,014,340	.....	289,070	569,272	1,872,682
Richmond.....	344	351	.....	143,780	163,080	42,364	349,224
Richmond tp.....	565	573	1,062,587	.....	244,310	266,618	1,573,515
Williamsburg.....	425	433	.....	142,260	99,500	32,277	274,037
Williamsburg tp..	654	649	1,504,543	.....	355,090	220,407	2,080,040
Ottawa.....	8,980	9,489	.....	4,919,545	2,451,233	553,476	7,924,254

LIVESTOCK.—FRANKLIN COUNTY.

Table showing number, value and mortality of livestock in the county for 1917 and 1918.

Livestock.	1917.		1918.		Mortality.	
	Number.	Value.	Number.	Value.	1917.	1918.
Horses.....	10,744	\$1,289,280.00	10,298	\$1,143,078.00	139	171
Mules and asses.....	2,225	300,375.00	1,755	245,700.00	10	9
Milk cows.....	9,039	677,925.00	10,599	869,118.00	93	174
Other cattle.....	21,606	1,080,300.00	21,224	1,146,096.00	437	534
Sheep.....	3,328	36,608.00	6,964	87,050.00	86	230
Swine.....	16,909	346,634.50	20,235	455,287.50	732	876
Totals.....	63,851	\$3,731,122.50	71,075	\$3,946,329.50	1,497	1,994

Number of dogs in county March 1, 1917, 1,668; March 1, 1918, 1,687.

Number of sheep killed by dogs, year ending March 1, 1917, 15; March 1, 1918, 27.

Number of sheep killed by wolves, year ending March 1, 1917, 17; March 1, 1918, 88.

Mortality of swine from cholera, year ending March 1, 1917, 584; March 1, 1918, 604.

FARM AND CROP STATISTICS.—FRANKLIN COUNTY.

Table showing acres, product and value of field crops in the county for 1917 and 1918.

Crops.	1917.			1918.		
	Acres.	Product.	Value.	Acres.	Product.	Value.
Winter wheat.....bu.	14,050	309,100	\$621,291.00	39,167	900,841	\$1,837,715.64
Spring wheat.....bu.						
Corn.....bu.	67,421	1,348,420	1,456,293.60	46,821	421,389	636,297.39
Oats.....bu.	27,897	1,060,086	604,249.02	29,496	855,384	590,214.96
Rye.....bu.	433	7,361	12,513.70	507	8,619	13,359.45
Barley.....bu.	56	1,400	1,400.00	40	880	880.00
Emmer ("speltz").....bu.				8	232	171.68
Irish potatoes.....bu.	768	54,528	84,518.40	725	32,625	46,653.75
Sweet potatoes.....bu.	40	4,320	6,955.20	3	216	352.32
Cowpeas.....tons	5	6	96.00	5	8	132.00
Flax.....bu.	268	2,010	5,427.00	43	301	978.25
Broom corn.....lbs.				69	20,700	2,070.00
Millet.....tons	302	453	4,530.00	146	256	2,816.00
Sugar beets.....tons	2	20	110.00			
Sorghum for syrup.....gals.	101	6,565	4,595.50	165	9,900	10,890.00
for seed.....bu.	122	2,196	3,843.00	110	1,430	2,502.50
for hay.....tons	753	3,012	18,072.00	685	2,398	19,184.00
Milo for grain.....bu.	152	2,280	3,306.00	76	760	1,216.00
for stover*.....tons		532	3,192.00		152	760.00
Kafir for grain.....bu.	9,874	118,488	186,026.16	6,121	67,331	107,729.60
for stover*.....tons		34,559	207,354.00		15,303	91,818.00
for hay.....tons	104	468	3,510.00	1,260	3,780	28,350.00
Feterita for grain.....bu.	286	5,720	8,122.40	76	988	1,610.44
for stover*.....tons		858	5,148.00		228	912.00
for hay.....tons	44	143	858.00	124	496	2,976.00
Sudan grass.....tons	68	238	1,904.00	122	366	3,660.00
Jerusalem corn.....tons	3	13	97.50	4	12	90.00
Alfalfa.....tons	7,308	21,193	423,860.00	8,719	21,798	501,354.00
Timothy.....tons	16,217			17,252		
Clover.....tons	8,884			4,207		
Blue grass.....tons	25,745			21,552		
Sweet clover.....tons	218	† 21,982	373,694.00	75	‡ 18,464	406,208.00
Orchard grass.....tons	70			28		
Other tame grasses.....tons	3,825			3,808		
Prairie hay.....tons	18,438	18,438	295,008.00	13,795	10,346	196,574.00
Totals.....	203,454		\$4,335,974.48	195,209		\$4,507,505.98

Corn on hand March 1, 1917, 44,100 bushels; March 1, 1918, 283,569 bushels.

Wheat on hand March 1, 1917, 2,230 bushels; March 1, 1918, 4,579 bushels.

Prairie grass for pasture March 1, 1918: Acres fenced, 56,989; acres not fenced, 126.

* Forage after harvesting grain. † Product of 1916. ‡ Product of 1917.

SUMMARY.—FRANKLIN COUNTY.

Showing quantity and value of farm products in the county for 1917 and 1918.

Products.	1917.		1918.	
	Quantity.	Value.	Quantity.	Value.
Field crops.....acres	203,454	\$4,335,974.48	195,209	\$4,507,505.98
Animals slaughtered or sold for slaughter.....		979,367.00		1,228,419.00
Poultry and eggs sold.....		224,414.00		231,468.00
Wool clip.....lbs.	15,822	4,430.16	7,671	4,142.34
Cheese.....lbs.	50	8.50		
Butter.....lbs.	1,145,532	372,526.50	2,358,512	986,946.84
Condensed milk.....lbs.	1,825,000	109,500.00	2,408,615	216,293.63
Milk sold.....		196,939.00		278,439.00
Honey and beeswax.....lbs.	39,725	7,178.00	8,480	2,122.15
Wood marketed.....		1,515.00		6,776.00
Totals.....		\$6,231,852.64		\$7,462,112.94

Number of cream separators March 1, 1917, 1,054; March 1, 1918, 1,035.

Number of silos March 1, 1917, 189; March 1, 1918, 214.

Number of tractors March 1, 1917, 26; March 1, 1918, 31.

GEARY COUNTY.

Organized in 1855; area, 257,637 acres; population, 12,794; rank in population, 51; assessed valuation, \$21,995,344; miles of railroad, main track, 44.80; county seat, Junction City; population, 8,507.

POPULATION AND VALUATION.—GEARY COUNTY.

Table showing total population, by townships and cities, for 1917 and 1918, and the assessed valuation of the municipal townships and cities of 1918.

Townships (and cities).	Population.		Assessed valuation of property, 1918.				
	1917.	1918.	Land.	City lots.	Personal.	Railroad, etc.	Total.
The county.....	10,745	12,794	\$9,479,634	\$3,993,312	\$6,123,723	\$2,398,675	\$21,995,344
Blakely tp.....	290	287	\$704,413	.....	\$284,265	\$70,122	\$1,058,800
Jackson tp.....	224	199	682,111	.....	251,258	118	933,487
Jefferson tp.....	510	539	1,060,567	.....	411,462	4,949	1,476,978
Liberty tp.....	604	597	1,293,626	.....	344,524	39	1,638,189
Lyon tp.....	432	440	1,166,819	.....	377,390	209,542	1,753,751
Milford tp.....	720	691	1,305,319	\$55,620	514,694	174,263	2,049,896
Smoky Hill tp.....	1,810	1,207	2,441,086	14,455	1,024,730	1,547,942	5,028,213
Wingfield tp.....	319	327	825,693	.....	202,870	804	1,029,367
Junction City.....	5,836	8,507	.....	3,923,237	2,712,530	390,896	7,026,663

LIVESTOCK.—GEARY COUNTY.

Table showing number, value and mortality of livestock in the county for 1917 and 1918.

Livestock.	1917.		1918.		Mortality.	
	Number.	Value.	Number.	Value.	1917.	1918.
Horses.....	4,769	\$572,280.00	4,856	\$539,016.00	31	81
Mules and asses.....	1,080	145,800.00	941	131,740.00	1	4
Milk cows.....	2,332	174,900.00	3,321	272,322.00	16	53
Other cattle.....	21,699	1,084,950.00	18,463	997,002.00	171	479
Sheep.....	588	6,468.00	673	8,412.50	.....	49
Swine.....	10,400	213,200.00	11,015	247,837.50	108	660
Totals.....	40,868	\$2,197,598.00	39,269	\$2,196,330.00	327	1,326

Number of dogs in county March 1, 1917, 641; March 1, 1918, 863.

Number of sheep killed by dogs, year ending March 1, 1918, 2.

Mortality of swine from cholera, year ending March 1, 1917, 49; March 1, 1918, 439.

FARM AND CROP STATISTICS.—GEARY COUNTY.

Table showing acres, product and value of field crops in the county for 1917 and 1918.

Crops.	1917.			1918.		
	Acres.	Product.	Value.	Acres.	Product.	Value.
Winter wheat.....bu.	17,398	295,766	\$621,108.60	26,243	472,374	\$963,642.96
Spring wheat.....bu.						
Corn.....bu.	37,069	741,380	837,759.40	31,057	248,456	360,261.20
Oats.....bu.	11,443	434,834	265,248.74	9,233	212,359	148,651.30
Rye.....bu.	616	12,320	20,328.00	987	13,818	21,417.90
Barley.....bu.	74	1,850	1,850.00	8	200	210.00
Emmer ("speltz").....bu.						
Irish potatoes.....bu.	437	25,783	38,674.50	392	14,896	22,344.00
Sweet potatoes.....bu.						
Cowpeas.....tons						
Flax.....bu.				4	28	91.00
Broom corn.....lbs.				14	3,500	350.00
Millet.....tons	267	601	5,409.00	228	456	5,016.00
Sugar beets.....tons						
Sorghum for syrup.....gals.				35	2,100	2,310.00
for seed.....bu.	191	2,292	3,438.00	501	4,509	8,341.65
for hay.....tons	454	1,476	11,808.00	368	1,288	10,304.00
Milo for grain.....bu.	43	645	838.50	88	880	1,452.00
for stover*.....tons		107	428.00		176	1,056.00
for hay.....tons	19	47	305.50			
Kafir for grain.....bu.	2,175	15,225	21,315.00	1,161	9,288	15,789.60
for stover*.....tons		4,350	23,925.00		2,903	20,321.00
for hay.....tons	142	426	3,195.00	192	576	4,896.00
Feterita for grain.....bu.	204	3,060	4,131.00	265	2,120	3,286.00
for stover*.....tons		408	1,632.00		729	3,645.00
for hay.....tons	38	104	676.00	16	48	336.00
Sudan grass.....tons	91	387	3,870.00	181	543	5,430.00
Jerusalem corn.....tons	20	60	450.00	2	6	51.00
Alfalfa.....tons	8,608	25,824	464,832.00	9,694	16,965	390,195.00
Timothy.....tons	4					
Clover.....tons						
Blue grass.....tons	20	†		107	‡	3,000.00
Sweet clover.....tons	22					
Orchard grass.....tons						
Other tame grasses.....tons						
Prairie hay.....tons	9,413	9,413	131,782.00	7,785	5,839	105,102.00
Totals.....	88,748		\$2,463,004.24	88,561		\$2,097,499.61

Corn on hand March 1, 1917, 128,835 bushels; March 1, 1918, 196,400 bushels.

Wheat on hand March 1, 1917, 16,995 bushels; March 1, 1918, 27,533 bushels.

Prairie grass for pasture March 1, 1918: Acres fenced, 98,842; acres not fenced, 2,585.

* Forage after harvesting grain. † Product of 1916. ‡ Product of 1917.

SUMMARY.—GEARY COUNTY.

Showing quantity and value of farm products in the county for 1917 and 1918.

Products.	1917.		1918.	
	Quantity.	Value.	Quantity.	Value.
Field crops.....acres	88,748	\$2,463,004.24	88,561	\$2,097,499.61
Animals slaughtered or sold for slaughter.....		740,303.00		1,141,015.00
Poultry and eggs sold.....		73,630.00		82,177.00
Wool clip.....lbs.	2,111	591.08	1,730	934.20
Cheese.....lbs.				
Butter.....lbs.	100,729	30,218.70	95,303	37,168.17
Condensed milk.....lbs.				
Milk sold.....		39,269.00		58,897.00
Honey and beeswax.....lbs.	5,288	956.84	1,821	455.45
Wood marketed.....		1,791.00		3,991.00
Totals.....		\$3,349,763.86		\$3,422,137.43

Number of cream separators March 1, 1917, 333; March 1, 1918, 342.

Number of silos March 1, 1917, 45; March 1, 1918, 33.

Number of tractors March 1, 1917, 25; March 1, 1918, 27.

GOVE COUNTY.

Organized in 1886; area, 688,779 acres; population, 4,645; rank in population, 90; assessed valuation, \$10,277,865; miles of railroad, main track, 37.10; county seat, Gove; population, 161.

POPULATION AND VALUATION.—GOVE COUNTY.

Table showing total population, by townships and cities, for 1917 and 1918, and the assessed valuation of the municipal townships and cities of 1918.

Townships (and cities).	Population.		Assessed valuation of property, 1918.				
	1917.	1918.	Land.	City lots.	Personal.	Railroad, etc.	Total.
The county	4,872	4,645	\$5,643,630	\$481,380	\$2,362,470	\$1,790,385	\$10,277,865
Quinter	354	326	.....	\$323,317	\$254,675	\$62,324	\$640,316
Baker tp.	760	759	\$911,580	3,730	336,805	324,414	1,576,529
Gaeland tp.	229	242	388,140	.....	87,220	123	475,483
Gove.	164	161	.....	35,082	78,035	.....	113,117
Gove tp.	374	346	586,740	.....	197,645	999	785,384
Grainfield.	270	256	.....	68,755	135,530	47,746	252,031
Grainfield tp.	327	344	579,185	.....	127,870	336,914	1,043,969
Grinnell tp.	628	575	1,015,230	38,563	394,890	682,775	2,117,295
Jerome tp.	278	307	478,325	.....	181,175	.....	659,500
Larrabee tp.	360	318	472,105	720	150,170	55	623,050
Lewis tp.	288	233	416,500	.....	100,255	279	517,034
Payne tp.	840	778	795,825	11,213	318,200	348,919	1,474,157

LIVESTOCK.—GOVE COUNTY.

Table showing number, value and mortality of livestock in the county for 1917 and 1918.

Livestock.	1917.		1918.		Mortality.	
	Number.	Value.	Number.	Value.	1917.	1918.
Horses	6,443	\$773,160.00	7,426	\$824,286.00	85	128
Mules and asses	1,454	196,290.00	1,171	163,940.00	15	17
Milk cows	2,696	202,200.00	3,089	253,298.00	34	97
Other cattle	15,234	761,700.00	14,223	768,042.00	191	245
Sheep	407	4,477.00	409	5,112.50	.....	6
Swine	3,160	64,780.00	2,148	48,330.00	49	74
Totals	29,394	\$2,002,607.00	28,466	\$2,063,008.50	374	567

Number of dogs in county March 1, 1917, 472; March 1, 1918, 574.

Number of sheep killed by dogs, year ending March 1, 1917, 2.

Mortality of swine from cholera, year ending March 1, 1917, 6.

FARM AND CROP STATISTICS.—GOVE COUNTY.

Table showing acres, product and value of field crops in the county for 1917 and 1918.

Crops.	1917.			1918.		
	Acres.	Product.	Value.	Acres.	Product.	Value.
Winter wheat.....bu.	15,687	47,061	\$98,828.10	5,835	11,670	\$22,756.50
Spring wheat.....bu.	318	636	1,291.08	309	618	1,198.92
Corn.....bu.	52,524	52,524	59,352.12	48,262	96,524	142,855.52
Oats.....bu.	7,089			12,310	24,620	19,696.00
Rye.....bu.	1,167			200	400	652.00
Barley.....bu.	34,021	102,063	103,083.63	27,996	223,968	212,769.60
Emmer ("speltz").....bu.	60			100	100	80.00
Irish potatoes.....bu.	153	3,060	4,590.00	108	2,160	3,110.40
Sweet potatoes.....bu.						
Cowpeas.....tons						
Flax.....bu.						
Broom corn.....lbs.	12	3,000	420.00			
Millet.....tons	4,836	2,418	26,598.00	4,834	3,626	43,512.00
Sugar beets.....tons						
Sorghum for syrup.....gals				161		
for seed.....bu.	8,332	16,664	24,996.00	16,020	144,180	259,524.00
for hay.....tons	20,602	15,452	154,520.00	26,548	46,459	464,590.00
Milo for grain.....bu.	10,809			6,863	41,178	62,178.78
for stover*.....tons		5,404	27,020.00		6,863	37,746.50
for hay.....tons	25			30	38	285.00
Kafir for grain.....bu.	17,704			12,631	37,893	60,628.80
for stover*.....tons		17,704	141,632.00		22,104	154,728.00
for hay.....tons	90	90	990.00	988	1,729	15,561.00
Feterita for grain.....bu.	7,647	15,294	22,941.00	3,629	10,887	16,874.85
for stover*.....tons		3,824	22,944.00		4,536	29,484.00
for hay.....tons	268	67	536.00	90	135	1,215.00
Sudan grass.....tons	61	122	1,220.00	528	660	7,260.00
Jerusalem corn.....tons	92	92	1,012.00	22	39	351.00
Alfalfa.....tons	726	1,452	30,492.00	628	1,256	25,120.00
Timothy.....tons						
Clover.....tons						
Blue grass.....tons		†			†	
Sweet clover.....tons						
Orchard grass.....tons						
Other tame grasses.....tons	15					
Prairie hay.....tons	653	326	5,216.00	13	13	195.00
Totals.....	182,891		\$727,681.93	168,105		\$1,582,372.87

Corn on hand March 1, 1917, 24,860 bushels; March 1, 1918, 3,541 bushels.

Wheat on hand March 1, 1917, 59,430 bushels; March 1, 1918, 2,345 bushels.

Prairie grass for pasture March 1, 1918: Acres fenced, 235,256; acres not fenced, 15,970.

* Forage after harvesting grain. † Product of 1916. ‡ Product of 1917.

SUMMARY.—GOVE COUNTY.

Showing quantity and value of farm products in the county for 1917 and 1918.

Products.	1917.		1918.	
	Quantity.	Value.	Quantity.	Value.
Field crops.....acres	182,891	\$727,681.93	168,105	\$1,582,372.87
Animals slaughtered or sold for slaughter.....		133,857.00		163,426.00
Poultry and eggs sold.....		48,292.00		52,884.00
Wool clip.....lbs.	1,056	295.68	1,500	810.00
Cheese.....lbs.				
Butter.....lbs.	49,811	14,943.30	41,894	16,338.66
Condensed milk.....lbs.				
Milk sold.....lbs.		35,784.00		58,927.00
Honey and beeswax.....lbs.				
Wood marketed.....				
Totals.....		\$960,853.91		\$1,874,758.53

Number of cream separators March 1, 1917, 335; March 1, 1918, 450.

Number of silos March 1, 1917, 21; March 1, 1918, 26.

Number of tractors March 1, 1917, 39; March 1, 1918, 36.

GRAHAM COUNTY.

Organized in 1880; area, 574,445 acres; population, 7,203; rank in population, 75; assessed valuation, \$14,528,650; miles of railroad, main track, 30.40; county seat, Hill City; population, 707.

POPULATION AND VALUATION.—GRAHAM COUNTY.

Table showing total population, by townships and cities, for 1917 and 1918, and the assessed valuation of the municipal townships and cities of 1918.

Townships (and cities).	Population.		Assessed valuation of property, 1918.				
	1917.	1918.	Land.	City lots.	Personal.	Railroad, etc.	Total.
The county.....	8,130	7,203	\$9,481,790	\$655,125	\$3,480,095	\$911,640	\$14,528,650
Allodium tp.....	549	503	\$781,650	.....	\$239,580	\$1,422	\$1,022,652
Bryant tp.....	803	890	987,505	\$17,710	281,390	790	1,287,395
Gettysburg tp....	475	532	778,965	.....	291,040	164,572	1,234,577
Graham tp.....	306	367	773,450	.....	250,250	1,682	1,025,382
Happy tp.....	770	552	985,260	.....	256,485	648	1,242,393
Hill City.....	854	707	.....	425,979	423,115	7,152	856,246
Hill City tp.....	389	316	523,610	5,760	139,790	123,870	793,030
Indiana tp.....	508	465	749,720	.....	203,585	1,636	954,941
Millbrook tp.....	615	486	584,595	24,815	209,115	79,937	898,462
Morlan tp.....	744	752	1,233,360	.....	319,825	328	1,553,513
Nicodemus tp.....	329	218	279,140	3,901	33,665	.....	316,706
Pioneer tp.....	478	373	683,850	.....	211,210	10	895,070
Morland.....	328	241	.....	136,270	211,770	26,326	374,366
Solomon tp.....	424	327	569,355	3,300	205,010	198,903	976,568
Wild Horse tp....	558	474	551,330	37,390	204,265	304,364	1,097,349

LIVESTOCK.—GRAHAM COUNTY.

Table showing number, value and mortality of livestock in the county for 1917 and 1918.

Livestock.	1917.		1918.		Mortality.	
	Number.	Value.	Number.	Value.	1917.	1918.
Horses.....	9,692	\$1,163,040.00	9,429	\$1,046,619.00	153	331
Mules and asses.....	2,857	385,695.00	2,537	355,180.00	11	29
Milk cows.....	5,280	396,000.00	5,984	490,688.00	90	209
Other cattle.....	20,406	1,020,300.00	15,923	859,842.00	352	539
Sheep.....	1,163	12,793.00	2,039	25,487.50	1	2
Swine.....	10,706	219,473.00	5,144	115,740.00	448	328
Totals.....	50,104	\$3,197,301.00	41,056	\$2,893,556.50	1,055	1,438

Number of dogs in county March 1, 1917, 1,042; March 1, 1918, 973.

Number of sheep killed by dogs, year ending March 1, 1917, 1; March 1, 1918, 8.

Number of sheep killed by wolves, year ending March 1, 1918, 2.

Mortality of swine from cholera, year ending March 1, 1917, 67; March 1, 1918, 30.

FARM AND CROP STATISTICS.—GRAHAM COUNTY.

Table showing acres, product and value of field crops in the county for 1917 and 1918.

Crops.	1917.			1918.		
	Acres.	Product.	Value.	Acres.	Product.	Value.
Winter wheat.....bu.	24,292	72,876	\$145,752.00	32,673	98,019	\$186,236.10
Spring wheat.....bu.				120	120	228.00
Corn.....bu.	164,225			141,598	283,196	404,970.28
Oats.....bu.	8,379			19,461	116,766	93,412.80
Rye.....bu.	256			2,675	8,025	13,241.25
Barley.....bu.	21,721			23,698	189,584	189,584.00
Emmer ("speltz").....bu.				1	5	4.25
Irish potatoes.....bu.	374	5,984	9,275.20	400	2,400	3,720.00
Sweet potatoes.....bu.	1	50	100.00	1	30	67.50
Cowpeas.....tons						
Flax.....bu.						
Broom corn.....lbs.	17	5,100	688.50	65	19,500	1,950.00
Millet.....tons	2,415			2,186	1,640	18,040.00
Sugar beets.....tons				1	6	57.00
Sorghum for syrup.....gals.	10			10		
for seed.....bu.	806			1,220	7,320	12,810.00
for hay.....tons	17,446	13,084	130,840.00	12,433	15,541	139,869.00
Milo for grain.....bu.	5,096			5,439	27,195	43,512.00
for stover*.....tons		1,274	6,370.00		5,439	32,634.00
for hay.....tons	58	29	232.00	269	336	2,520.00
Kafir for grain.....bu.	20,596			23,662	47,324	78,084.60
for stover*.....tons		20,596	164,768.00		35,493	212,958.00
for hay.....tons	688	688	7,568.00	129	194	1,552.00
Feterita for grain.....bu.	5,066	10,132	15,198.00	3,389	23,723	36,770.65
for stover*.....tons					5,931	35,586.00
for hay.....tons	109	54	432.00	380	665	5,320.00
Sudan grass.....tons	311	156	1,872.00	941	1,647	16,470.00
Jerusalem corn.....tons	12	12	132.00	16	24	192.00
Alfalfa.....tons	2,164	3,895	85,690.00	2,093	4,186	79,534.00
Timothy.....tons						
Clover.....tons				20		
Blue grass.....tons						
Sweet clover.....tons	74	†		6	†	
Orchard grass.....tons				50		
Other tame grasses.....tons	20			58		
Prairie hay.....tons	5,530	2,765	38,710.00	5,478	2,739	41,085.00
Totals.....	279,666		\$607,627.70	278,472		\$1,650,408.43

Corn on hand March 1, 1917, 171,985 bushels; March 1, 1918, 22,879 bushels.

Wheat on hand March 1, 1917, 136,658 bushels; March 1, 1918, 14,770 bushels.

Prairie grass for pasture March 1, 1918: Acres fenced, 137,636; acres not fenced, 9,937.

* Forage after harvesting grain. † Product of 1916. ‡ Product of 1917.

SUMMARY.—GRAHAM COUNTY.

Showing quantity and value of farm products in the county for 1917 and 1918.

Products.	1917.		1918.	
	Quantity.	Value.	Quantity.	Value.
Field crops.....acres	279,666	\$607,627.70	278,472	\$1,650,408.43
Animals slaughtered or sold for slaughter.....		525,245.00		504,631.00
Poultry and eggs sold.....		111,152.00		88,586.00
Wool clip.....lbs.	1,620	453.60	2,419	1,306.26
Cheese.....lbs.	10	1.70	501	90.18
Butter.....lbs.	146,161	43,848.30	119,781	46,714.59
Condensed milk.....lbs.				
Milk sold.....		63,192.00		89,413.00
Honey and beeswax.....lbs.				
Wood marketed.....		420.00		1,325.00
Totals.....		\$1,351,940.30		\$2,382,474.46

Number of cream separators March 1, 1917, 728; March 1, 1918, 725.

Number of silos March 1, 1917, 39; March 1, 1918, 67.

Number of tractors March 1, 1917, 15; March 1, 1918, 19.

GRANT COUNTY.

Organized in 1888; area, 367,763 acres; population, 1,094; rank in population, 104; assessed valuation, \$3,799,852; miles of railroad, main track, 1.97; county seat, New Ulysses.

POPULATION AND VALUATION.—GRANT COUNTY.

Table showing total population, by townships and cities, for 1917 and 1918, and the assessed valuation of the municipal townships and cities of 1918.

Townships (and cities).	Population.		Assessed valuation of property, 1918.				
	1917.	1918.	Land.	City lots.	Personal.	Railroad, etc.	Total.
The county	1,090	1,094	\$2,910,987	\$37,665	\$817,020	\$34,180	\$3,799,852
Lincoln tp.....	344	359	\$753,784	\$37,665	\$208,195	.....	\$999,644
Sherman tp.....	405	407	1,080,844	.....	346,770	.....	1,427,614
Sullivan tp.....	341	328	1,076,359	.....	262,055	\$34,180	1,372,594

LIVESTOCK.—GRANT COUNTY.

Table showing number, value and mortality of livestock in the county for 1917 and 1918.

Livestock.	1917.		1918.		Mortality.	
	Number.	Value.	Number.	Value.	1917.	1918.
Horses.....	2,699	\$323,880.00	3,218	\$357,198.00	74	98
Mules and asses.....	585	78,975.00	615	86,100.00	3	1
Milk cows.....	362	27,150.00	283	23,206.00	6	5
Other cattle.....	8,046	402,300.00	11,774	635,796.00	244	433
Sheep.....	115	1,265.00	116	1,450.00	.....	.....
Swine.....	676	13,858.00	1,040	23,400.00	13	79
Totals.....	12,483	\$847,428.00	17,046	\$1,127,150.00	340	616

Number of dogs in county March 1, 1917, 144; March 1, 1918, 174.

Number of sheep killed by dogs, year ending March 1, 1917, 1.

Mortality of swine from cholera, year ending March 1, 1918, 5.

FARM AND CROP STATISTICS.—GRANT COUNTY.

Table showing acres, product and value of field crops in the county for 1917 and 1918.

Crops.	1917.			1918.		
	Acres.	Product.	Value.	Acres.	Product.	Value.
Winter wheat..... bu.	183	549	\$1,152.90	530	2,650	\$5,247.00
Spring wheat..... bu.				4	20	39.00
Corn..... bu.	1,540	12,320	15,400.00	2,640	26,400	39,600.00
Oats..... bu.	237			96	1,440	1,152.00
Rye..... bu.	82	656	1,049.60	30	330	544.50
Barley..... bu.	1,140	6,840	6,840.00	928	12,064	11,460.80
Emmer ("speltz")..... bu.						
Irish potatoes..... bu.				2	20	28.00
Sweet potatoes..... bu.						
Cowpeas..... tons						
Flax..... bu.						
Broom corn..... lbs.	2,595	778,500	101,205.00	2,656	836,640	83,664.00
Millet..... tons	60	60	600.00	16	16	176.00
Sugar beets..... tons						
Sorghum for syrup..... gals.				20		
for seed..... bu.	285	3,135	4,953.30	3,297	36,267	63,467.25
for hay..... tons	3,680	6,440	51,520.00	3,182	5,569	50,121.00
Milo for grain..... bu.	8,208	98,496	165,473.28	12,401	198,416	287,703.20
for stover*..... tons		4,104	20,520.00		12,401	49,604.00
for hay..... tons						
Kafir for grain..... bu.	4,931	49,310	73,965.00	5,511	55,110	79,909.50
for stover*..... tons		4,931	24,655.00		5,511	27,555.00
for hay..... tons	190	237	2,370.00	80	140	1,120.00
Feterita for grain..... bu.	708	8,496	14,273.28	958	14,370	20,118.00
for stover*..... tons		531	2,655.00		958	4,790.00
for hay..... tons	55	42	252.00	60	60	420.00
Sudan grass..... tons	345	518	6,216.00	284	568	5,680.00
Jerusalem corn..... tons	5	6	60.00	55	96	768.00
Alfalfa..... tons	268			48	108	2,160.00
Timothy..... tons						
Clover..... tons						
Blue grass..... tons						
Sweet clover..... tons	14	†		14	‡	190.00
Orchard grass..... tons						
Other tame grasses..... tons						
Prairie hay..... tons	1,218	1,218	17,052.00	220	165	2,640.00
Totals.....	25,744		\$510,212.36	33,032		\$738,157.25

Corn on hand March 1, 1917, 5,418 bushels; March 1, 1918, 6,245 bushels.

Wheat on hand March 1, 1917, 50 bushels; March 1, 1918, 240 bushels.

Prairie grass for pasture March 1, 1918: Acres, fenced, 87,011; acres not fenced, 6,260.

* Forage after harvesting grain. † Product of 1916. ‡ Product of 1917.

SUMMARY.—GRANT COUNTY.

Showing quantity and value of farm products in the county for 1917 and 1918.

Products.	1917.		1918.	
	Quantity.	Value.	Quantity.	Value.
Field crops..... acres	25,744	\$510,212.36	33,032	\$738,157.25
Animals slaughtered or sold for slaughter.....		21,248.00		110,678.00
Poultry and eggs sold.....		10,292.00		5,127.00
Wool clip..... lbs.	32	8.96		
Cheese..... lbs.				
Butter..... lbs.	7,018	2,105.40	11,965	4,666.35
Condensed milk..... lbs.				
Milk sold.....		2,850.00		10,769.00
Honey and beeswax..... lbs.				
Wood marketed.....				
Totals.....		\$546,716.72		\$869,397.60

Number of cream separators March 1, 1917, 50; March 1, 1918, 47.

Number of silos March 1, 1917, 1; March 1, 1918, 7.

Number of tractors March 1, 1917, 7; March 1, 1918, 3.

GRAY COUNTY.

Organized in 1887; area, 555,155 acres; population, 4,592; rank in population, 91; assessed valuation, \$11,548,175; miles of railroad, main track, 51.17; county seat, Cimarron; population, 597.

POPULATION AND VALUATION.—GRAY COUNTY.

Table showing total population, by townships and cities, for 1917 and 1918, and the assessed valuation of the municipal townships and cities of 1918.

Townships (and cities).	Population.		Assessed valuation of property, 1918.				
	1917.	1918.	Land.	City lots.	Personal.	Railroad, etc.	Total.
The county.....	4,772	4,592	\$6,881,542	\$487,300	\$2,273,398	\$1,905,935	\$11,548,175
Cimarron.....	672	597	.....	\$263,982	\$349,137	\$71,420	\$684,539
Cimarron tp.....	562	428	\$874,459	5,155	166,974	600,811	1,647,399
Copeland tp.....	412	403	736,548	56,020	172,978	126,682	1,092,228
Foote tp.....	321	328	848,045	.....	140,922	773	989,740
Hess, East tp.....	472	850	1,023,017	48,630	527,312	122,529	1,721,488
Hess, West tp.....	667	467	894,550	.....	182,535	121,570	1,198,655
Ingalls tp.....	698	610	849,950	35,660	305,499	296,905	1,488,014
Logan tp.....	248	328	885,043	6,380	194,190	437,912	1,523,525
Montezuma.....	199	122	.....	71,473	78,611	26,477	176,561
Montezuma tp.....	521	459	769,930	.....	155,240	100,856	1,026,026

LIVESTOCK.—GRAY COUNTY.

Table showing number, value and mortality of livestock in the county for 1917 and 1918.

Livestock.	1917.		1918.		Mortality.	
	Number.	Value.	Number.	Value.	1917.	1918.
Horses.....	5,876	\$705,120.00	6,069	\$673,659.00	114	255
Mules and asses.....	1,886	254,610.00	1,387	194,180.00	14	28
Milk cows.....	2,079	155,925.00	2,647	217,054.00	46	96
Other cattle.....	12,579	628,950.00	9,729	525,366.00	213	284
Sheep.....	7	77.00	9	112.50	1	3
Swine.....	3,575	73,287.50	1,686	37,935.00	62	148
Totals.....	26,002	\$1,817,969.50	21,527	\$1,648,306.50	450	814

Number of dogs in county March 1, 1917, 604; March 1, 1918, 538.

Number of sheep killed by dogs, year ending March 1, 1917, 1.

Mortality of swine from cholera, year ending March 1, 1917, 4; March 1, 1918, 33.

FARM AND CROP STATISTICS.—GRAY COUNTY.

Table showing acres, product and value of field crops in the county for 1917 and 1918.

Crops.	1917.			1918.		
	Acres.	Product.	Value.	Acres.	Product.	Value.
Winter wheat.....bu.	10,464	31,392	\$66,551.04	15,254	45,762	\$90,608.76
Spring wheat.....bu.	220	220	453.20	9	27	52.65
Corn.....bu.	53,534	214,136	254,821.84	21,128	84,512	122,542.40
Oats.....bu.	16,100			10,229	20,458	15,957.24
Rye.....bu.	802			1,769	5,307	8,756.55
Barley.....bu.	21,490			7,515	22,545	22,545.00
Emmer ("speltz").....bu.						
Irish potatoes.....bu.	43	215	354.75	27	270	432.00
Sweet potatoes.....bu.	6	300	600.00	4	48	108.00
Cowpeas.....tons				10	15	247.50
Flax.....bu.						
Bro m corn.....lbs.	69	20,010	2,601.30	3,017	1,055,950	105,595.00
Millet.....tons	67	67	670.00	510	510	5,610.00
Sugar beets.....tons	2	20	120.00			
Sorghum for syrup.....gals.	95			20	400	440.00
for seed.....bu.	480	1,440	2,246.40	8,689	43,445	78,201.00
for hay.....tons	9,100	9,100	81,900.00	5,418	6,773	71,116.50
Milo for grain.....bu.	17,711	106,266	154,085.70	10,485	62,910	94,365.00
for stover*.....tons		13,283	79,698.00		10,485	73,395.00
for hay.....tons	65	49	367.50	528	528	4,752.00
Kafir for grain.....bu.	22,447	67,341	101,684.91	14,374	86,244	133,678.20
for stover*.....tons		22,447	168,352.50		17,968	134,760.00
for hay.....tons	29	239	2,151.00	907	1,134	10,206.00
Feterita for grain.....bu.	11,417	68,502	106,178.10	4,664	32,648	48,319.04
for stover*.....tons		8,562	55,653.00		5,830	37,895.00
for hay.....tons	335	419	3,142.50	1,676	1,676	14,246.00
Sudan grass.....tons		360	4,320.00	3,002	4,503	54,036.00
Jerusalem corn.....tons	225	225	2,025.00	125	156	1,404.00
Alfalfa.....tons	1,494	3,436	68,720.00	2,083	4,166	87,486.00
Timothy.....tons						
Clover.....tons						
Blue grass.....tons						
Sweet clover.....tons	54	†		35	‡ 40	800.00
Orchard grass.....tons						
Other tame grasses.....tons						
Prairie hay.....tons	980	490	6,860.00	240	120	1,800.00
Totals.....	167,799		\$1,163,556.74	111,718		\$1,219,354.84

Corn on hand March 1, 1917, 6,004 bushels; March 1, 1918, 6,778 bushels.

Wheat on hand March 1, 1917, 16,745 bushels; March 1, 1918, 338 bushels.

Prairie grass for pasture March 1, 1918: Acres fenced, 108,875; acres not fenced, 16,330.

* Forage after harvesting grain. † Product of 1916. ‡ Product of 1917.

SUMMARY.—GRAY COUNTY.

Showing quantity and value of farm products in the county for 1917 and 1918.

Products.	1917.		1918.	
	Quantity.	Value.	Quantity.	Value.
Field crops.....acres	167,799	\$1,163,556.74	111,718	\$1,219,354.84
Animals slaughtered or sold for slaughter.....		165,606.00		129,629.00
Poultry and eggs sold.....		34,726.00		29,103.00
Wool clip.....lbs.				
Cheese.....lbs.				
Butter.....lbs.	33,203	9,960.90	30,568	11,921.52
Condensed milk.....lbs.				
Milk sold.....lbs.		19,977.00		38,892.00
Honey and beeswax.....lbs.	169	30.42		
Wood marketed.....		15.00		
Totals.....		\$1,393,872.06		\$1,428,900.36

Number of cream separators March 1, 1917, 307; March 1, 1918, 352.

Number of silos March 1, 1917, 30; March 1, 1918, 32.

Number of tractors March 1, 1917, 51; March 1, 1918, 60.

GREELEY COUNTY.

Organized in 1888; area, 496,998 acres; population, 1,143; rank in population, 103; assessed valuation, \$4,285,537; miles of railroad, main track, 26.21; county seat, Tribune; population, 190.

POPULATION AND VALUATION.—GREELEY COUNTY.

Table showing total population, by townships and cities, for 1917 and 1918, and the assessed valuation of the municipal townships and cities of 1918.

Townships (and cities).	Population.		Assessed valuation of property, 1918.				
	1917.	1918.	Land.	City lots.	Personal.	Railroad, etc.	Total
The county	1,123	1,143	\$2,314,081	\$81,820	\$803,274	\$1,086,362	\$4,285,537
Colony tp.....	405	435	\$1,036,658	.....	\$279,975	\$470,565	\$1,787,198
Harrison tp.....	136	131	584,980	.....	157,250	337,784	1,080,014
Horace.....	154	113	.....	\$19,910	17,565	72,234	109,709
Tribune.....	212	190	.....	61,910	95,255	35,413	192,578
Tribune tp.....	216	274	692,443	.....	253,229	170,366	1,116,038

LIVESTOCK.—GREELEY COUNTY.

Table showing number, value and mortality of livestock in the county for 1917 and 1918.

Livestock.	1917.		1918.		Mortality.	
	Number.	Value.	Number.	Value.	1917.	1918..
Horses.....	2,955	\$354,600.00	3,106	\$344,766.00	6	7
Mules and asses.....	807	108,945.00	646	90,440.00	1	.....
Milk cows.....	744	55,800.00	563	46,166.00	1	.....
Other cattle.....	9,989	499,450.00	11,410	616,140.00	21	46
Sheep.....	1,045	11,495.00	4,644	58,050.00	.....	1,145
Swine.....	281	5,760.50	304	6,840.00	11	.....
Totals.....	15,821	\$1,036,050.50	20,673	\$1,162,402.00	40	1,198

Number of dogs in county March 1, 1917, 172; March 1, 1918, 154.

Number of sheep killed by dogs, year ending March 1, 1918, 2.

Number of sheep killed by wolves, year ending March 1, 1918, 2.

FARM AND CROP STATISTICS.—GREELEY COUNTY.

Table showing acres, product and value of field crops in the county for 1917 and 1918.

Crops.	1917.			1918.		
	Acres.	Product.	Value.	Acres.	Product.	Value.
Winter wheat.....bu.	37	185	\$392.20	103	412	\$803.40
Spring wheat.....bu.	200	320	659.20	85	425	820.25
Corn.....bu.	2,774	5,548	7,212.40	2,827	28,270	42,405.00
Oats.....bu.	47			151	453	339.75
Rye.....bu.	117			86	258	425.70
Barley.....bu.	1,133	7,931	8,010.31	1,203	16,842	15,494.64
Emmer ("speltz").....bu.	20					
Irish potatoes.....bu.	4			25	625	906.25
Sweet potatoes.....bu.						
Cowpeas.....tons	2	2	32.00			
Flax.....bu.						
Broom corn.....lbs.	413	82,600	11,564.00	724	217,200	21,720.00
Millet.....tons	518	259	2,849.00	345	345	3,450.00
Sugar beets.....tons						
Sorghum for syrup.....gals.						
for seed.....bu.				166	1,826	3,286.80
for hay.....tons	5,260	5,260	52,600.00	4,861	8,507	93,577.00
Milo for grain.....bu.	1,366	9,562	13,386.80	1,636	19,632	28,466.40
for stover*.....tons		683	3,415.00		2,454	12,270.00
for hay.....tons	168	168	1,176.00	75	113	734.50
Kafir for grain.....bu.	819	6,552	10,483.20	920	8,280	12,420.00
for stover*.....tons		819	5,733.00		1,150	6,900.00
for hay.....tons	611	916	9,160.00			
Feterita for grain.....bu.	179	895	1,342.50	89	712	1,068.00
for stover*.....tons		179	895.00		89	534.00
for hay.....tons	80	120	840.00	119	179	1,432.00
Sudan grass.....tons	307	691	8,292.00	421	737	7,370.00
Jerusalem corn.....tons				3	6	54.00
Alfalfa.....tons	104	208	3,744.00	74	148	2,664.00
Timothy.....tons						
Clover.....tons						
Blue grass.....tons						
Sweet clover.....tons		†			†	
Orchard grass.....tons						
Other tame grasses.....tons						
Prairie hay.....tons	55	55	770.00			
Totals.....	14,214		\$142,556.61	13,913		\$257,141.69

Corn on hand March 1, 1917, 2,498 bushels; March 1, 1918, 1,310 bushels.

Wheat on hand March 1, 1917, 165 bushels; March 1, 1918, 20 bushels.

Prairie grass for pasture March 1, 1918: Acres fenced, 50,975; acres not fenced, 7,273.

* Forage after harvesting grain. † Product of 1916. ‡ Product of 1917.

SUMMARY.—GREELEY COUNTY.

Showing quantity and value of farm products in the county for 1917 and 1918.

Products.	1917.		1918.	
	Quantity.	Value.	Quantity.	Value.
Field crops.....acres	14,214	\$142,556.61	13,913	\$257,141.69
Animals slaughtered or sold for slaughter.....		27,008.00		37,465.00
Poultry and eggs sold.....		5,399.00		7,314.00
Wool clip.....lbs.			15,200	8,208.00
Cheese.....lbs.				
Butter.....lbs.	12,479	3,743.70	14,054	5,481.06
Condensed milk.....lbs.				
Milk sold.....		12,366.00		19,978.00
Honey and beeswax.....lbs.				
Wood marketed.....				
Totals.....		\$191,073.31		\$335,587.75

Number of cream separators March 1, 1917, 111; March 1, 1918, 126.

Number of silos March 1, 1917, 18; March 1, 1918, 21.

Number of tractors March 1, 1917, 5; March 1, 1918, 10.

GREENWOOD COUNTY.

Organized in 1862; area, 734,284 acres; population, 15,041; rank in population, 44; assessed valuation, \$37,744,134; miles of railroad, main track, 149.83; county seat, Eureka; population, 2,739.

POPULATION AND VALUATION.—GREENWOOD COUNTY.

Table showing total population, by townships and cities, for 1917 and 1918, and the assessed valuation of the municipal townships and cities of 1918.

Townships (and cities).	Population.		Assessed valuation of property, 1918.				
	1917.	1918.	Land.	City lots.	Personal.	Railroad, etc.	Total.
The county.....	15,012	15,041	\$20,139,976	\$2,261,800	\$8,761,310	\$6,581,048	\$37,744,134
Bachelor tp.....	605	612	\$1,230,530	\$3,780	\$377,400	\$745,136	\$2,356,846
Eureka.....	2,532	2,739	3,448	1,266,630	1,041,720	150,011	2,458,361
Eureka tp.....	700	709	1,274,140	405,075	500,813	2,180,028	2,180,028
Fall River tp.....	842	799	1,148,417	26,980	403,930	244,008	1,823,335
Hamilton.....	351	355	142,730	239,205	25,034	406,969	406,969
Janesville tp.....	1,083	1,059	2,498,198	998,045	442,990	3,939,233	3,939,233
Lane tp.....	551	584	1,001,757	19,315	416,420	435,841	1,873,333
Madison.....	688	637	288,930	325,665	97,840	712,435	712,435
Madison tp.....	1,077	1,008	2,499,968	667,370	587,425	3,754,763	3,754,763
Otter Creek tp.....	901	900	1,736,791	42,620	527,280	506,653	2,813,344
Pleasant Grove tp.....	561	468	910,603	238,385	484,393	1,633,381	1,633,381
Quincy tp.....	769	731	1,131,378	53,435	380,240	2,037,102	2,037,102
Salem tp.....	190	195	1,344,448	170,325	170,325	1,514,773	1,514,773
Fall River.....	345	323	120,645	193,755	26,283	340,683	340,683
Salt Springs tp.....	807	767	1,196,919	344,785	290,705	1,832,409	1,832,409
Shell Rock tp.....	660	642	978,864	477,315	277,750	1,752,564	1,752,564
South Salem tp.....	515	526	1,368,803	734,905	306	2,104,014	2,104,014
Spring Creek tp.....	489	588	826,981	33,455	349,510	549,693	1,759,639
Severy.....	594	594	244,645	235,490	60,845	540,980	540,980
Twin Grove tp.....	752	805	992,179	274,490	683,273	1,909,942	1,909,942

LIVESTOCK.—GREENWOOD COUNTY.

Table showing number, value and mortality of livestock in the county for 1917 and 1918.

Livestock.	1917.		1918.		Mortality.	
	Number.	Value.	Number.	Value.	1917.	1918.
Horses.....	12,117	\$1,454,040.00	12,206	\$1,354,866.00	66	57
Mules and asses.....	3,561	480,735.00	2,726	381,640.00	6	4
Milk cows.....	5,240	393,000.00	6,588	540,216.00	35	52
Other cattle.....	46,544	2,327,200.00	39,352	2,125,003.00	138	321
Sheep.....	905	9,955.00	1,080	13,500.00	.....	4
Swine.....	15,420	316,110.00	16,782	377,595.00	367	110
Totals.....	83,787	\$4,981,040.00	78,734	\$4,792,825.00	612	548

Number of dogs in county March 1, 1917, 1,542; March 1, 1918, 1,630.

Number of sheep killed by dogs, year ending March 1, 1917, 2.

Mortality of swine from cholera, year ending March 1, 1917, 280; March 1, 1918, 4.

FARM AND CROP STATISTICS.—GREENWOOD COUNTY.

Table showing acres, product and value of field crops in the county for 1917 and 1918.

Crops.	1917.			1918.		
	Acres.	Product.	Value.	Acres.	Product.	Value.
Winter wheat.....bu.	1,262	26,502	\$58,304.40	12,627	265,167	\$532,985.67
Spring wheat.....bu.				38	722	1,436.78
Corn.....bu.	77,797	1,011,361	1,223,746.81	55,089	385,623	597,715.65
Oats.....bu.	6,242	218,470	139,820.80	14,297	414,613	302,667.49
Rye.....bu.	879	14,943	25,403.10	2,594	44,098	67,910.92
Barley.....bu.	12	300	300.00	27	540	567.00
Emmer ("speltz").....bu.						
Irish potatoes.....bu.	815	33,415	48,451.75	696	28,536	42,804.00
Sweet potatoes.....bu.	2	80	120.00			
Cowpeas.....tons	94	117	1,872.00	127	191	3,151.50
Flax.....bu.	565	3,390	9,153.00	1,255	6,275	20,393.75
Broom corn.....lbs.				5	1,500	150.00
Millet.....tons	616	1,232	12,320.00	145	254	3,048.00
Sugar beets.....tons				1	6	57.00
Sorghum for syrup.....gals.	17	1,020	714.00	68	3,060	3,366.00
for seed.....bu.	1,794	21,528	38,750.40	2,162	19,458	34,635.24
for hay.....tons	5,587	15,365	76,825.00	5,939	14,848	103,936.00
Milo for grain.....bu.	158	1,896	2,521.68	1,009	11,099	17,758.40
for stover*.....tons		316	1,264.00		3,279	18,034.50
for hay.....tons	12	27	162.00	23	75	487.50
Kafir for grain.....bu.	34,554	310,986	466,479.00	28,283	169,698	254,547.00
for stover*.....tons		86,385	345,540.00		77,778	466,668.00
for hay.....tons	275	687	4,122.00	119	298	2,235.00
Peterita for grain.....bu.	485	7,275	9,093.75	554	5,540	8,310.00
for stover*.....tons		1,213	3,639.00		1,108	6,094.00
for hay.....tons	81	222	1,332.00	335	675	5,025.00
Sudan grass.....tons	39	137	1,096.00	24	60	600.00
Jerusalem corn.....tons						
Alfalfa.....tons	19,512	58,536	1,053,648.00	21,961	60,393	1,268,253.00
Timothy.....tons	158			97		
Clover.....tons	141			132		
Blue grass.....tons	266	† 2,843	42,645.00	443	‡ 3,000	60,000.00
Sweet clover.....tons	2,634			3,238		
Orchard grass.....tons				1		
Other tame grasses.....tons	20			28		
Prairie hay.....tons	26,992	20,244	283,416.00	21,426	10,713	171,408.00
Totals.....	181,009		\$3,850,739.69	172,743		\$3,994,245.40

Corn on hand March 1, 1917, 60,114 bushels; March 1, 1918, 172,566 bushels.

Wheat on hand March 1, 1917, 25 bushels; March 1, 1918, 1,816 bushels.

Prairie grass for pasture March 1, 1918: Acres fenced, 218,294; acres not fenced, 5,650.

* Forage after harvesting grain. † Product of 1916. ‡ Product of 1917.

SUMMARY.—GREENWOOD COUNTY.

Showing quantity and value of farm products in the county for 1917 and 1918.

Products.	1917.		1918.	
	Quantity.	Value.	Quantity.	Value.
Field crops.....acres	181,009	\$3,850,739.69	172,743	\$3,994,245.40
Animals slaughtered or sold for slaughter.....		2,477,193.00		2,419,665.00
Poultry and eggs sold.....		149,361.00		139,309.00
Wool clip.....lbs.	1,115	312.20	1,848	997.92
Cheese.....lbs.	100	17.00	124	22.32
Butter.....lbs.	211,996	63,598.80	175,622	68,492.58
Condensed milk.....lbs.				
Milk sold.....		84,344.00		122,465.00
Honey and beeswax.....lbs.	16,209	2,931.52	24,031	6,009.80
Wood marketed.....		886.00		868.00
Totals.....		\$6,629,383.21		\$6,752,075.02

Number of cream separators March 1, 1917, 762; March 1, 1918, 920.

Number of silos March 1, 1917, 249; March 1, 1918, 208.

Number of tractors March 1, 1917, 22; March 1, 1918, 26.

HAMILTON COUNTY.

Organized in 1886; area, 637,082 acres; population, 2,540; rank in population, 97; assessed valuation, \$6,711,773; miles of railroad, main track, 28.54; county seat, Syracuse; population, 843.

POPULATION AND VALUATION.—HAMILTON COUNTY.

Table showing total population, by townships and cities, for 1917 and 1918, and the assessed valuation of the municipal townships and cities of 1918.

Townships (and cities).	Population.		Assessed valuation of property, 1918.				
	1917.	1918.	Land.	City lots.	Personal.	Railroad, etc.	Total.
The county.....	2,604	2,540	\$2,960,535	\$353,869	\$1,637,817	\$1,759,552	\$6,711,773
Bear Creek tp....	317	299	\$492,333	.....	\$261,990	\$519	\$754,842
Coolidge.....	88\ 317	87\ 299	.....	\$27,240	23,300	70,264	120,804
Coolidge tp.....	242\ 330	250\ 337	321,953	1,540	171,460	294,126	789,079
Kendall tp.....	205	191	343,983	7,460	195,541	348,651	895,635
Lamont tp.....	254	245	411,093	.....	186,680	.....	597,773
Liberty tp.....	111	114	277,113	.....	69,595	.....	346,708
Medway tp.....	125	132	340,191	760	136,649	342,688	820,288
Ri hland tp.....	167	173	427,014	.....	101,865	.....	528,879
Syracuse.....	866\ 1,095	843\ 1,049	.....	311,494	350,017	232,243	893,754
Syracuse tp.....	229\ 1,095	206\ 1,049	346,855	5,375	140,720	471,061	964,011

LIVESTOCK.—HAMILTON COUNTY.

Table showing number, value and mortality of livestock in the county for 1917 and 1918.

Livestock.	1917.		1918.		Mortality.	
	Number.	Value.	Number.	Value.	1917.	1918.
Horses.....	3,406	\$408,720.00	3,787	\$420,357.00	30	33
Mules and asses.....	789	106,515.00	696	97,440.00	4	2
Milk cows.....	1,280	96,000.00	924	75,768.00	22	8
Other cattle.....	17,353	867,650.00	14,255	769,770.00	279	458
Sheep.....	6,500	71,500.00	6,994	87,425.00	25	35
Swine.....	784	16,072.00	438	9,850.00	17	21
Totals.....	30,112	\$1,566,457.00	27,094	\$1,460,615.00	377	557

Number of dogs in county March 1, 1917, 253; March 1, 1918, 283.

Number of sheep killed by dogs, year ending March 1, 1917, 1.

Mortality of swine from cholera, year ending March 1, 1918, 8.

FARM AND CROP STATISTICS.—HAMILTON COUNTY.

Table showing acres, product and value of field crops in the county for 1917 and 1918.

Crops.	1917.			1918.		
	Acres.	Product.	Value.	Acres.	Product	Value.
Winter wheat.....bu.	10	100	\$213.00	92	920	1,794.00
Spring wheat.....bu.				100	600	1,158.00
Corn.....bu.	1,948	23,376	32,258.88	1,209	9,672	14,508.00
Oats.....bu.	8					
Rye.....bu.						
Barley.....bu.	205	1,640	1,640.00	93	1,674	1,590.30
Emmer ("speltz").....bu.						
Irish potatoes.....bu.	1	30	52.50	2	80	120.00
Sweet potatoes.....bu.						
Cowpeas.....tons	2	2	32.00	12	18	297.00
Flax.....bu.	2	12	32.40			
Broom corn.....lbs.	7,417	1,854,250	241,052.50	5,342	1,789,570	161,061.30
Millet.....tons	33	25	250.00	28	28	308.00
Sugar beets.....tons						
Sorghum for syrup.....gals.				3	45	49.50
for seed.....bu.	55	275	412.50	120	1,800	3,150.00
for hay.....tons	2,799	5,598	55,980.00	3,620	5,430	59,730.00
Milo for grain.....bu.		53,730	91,341.00	5,710	74,230	112,087.30
for stover*.....tons		3,582	19,701.00		5,710	28,550.00
for hay.....tons	253	379	2,653.00	50	50	325.00
Kafir for grain.....bu.	721	8,652	13,843.20	902	9,020	13,530.00
for stover*.....tons		1,442	10,815.00		1,353	8,794.50
for hay.....tons	100	200	2,000.00	81	162	1,458.00
Feterita for grain.....bu.	393	5,109	7,663.50	389	4,668	6,815.28
for stover*.....tons		393	1,965.00		486	3,472.00
for hay.....tons	240	480	3,360.00	83	166	1,494.00
Sudan grass.....tons	134	235	2,820.00	146	329	3,948.00
Jerusalem corn.....tons	30	60	600.00	98	196	1,764.00
Alfalfa.....tons	3,475	9,730	165,410.00	2,957	7,393	155,253.00
Timothy.....tons						
Clover.....tons						
Blue grass.....tons						
Sweet clover.....tons	20	†		25	†	
Orchard grass.....tons						
Other tame grasses.....tons	155					
Prairie hay.....tons	5,755	5,755	86,325.00	1,938	1,938	29,070.00
Totals.....	27,338		\$740,420.48	23,000		\$610,257.18

Corn on hand March 1, 1917, 1,165 bushels.

Prairie grass for pasture March 1, 1918: Acres fenced, 42,009; acres not fenced, 21,755.

* Forage after harvesting grain. † Product of 1916. ‡ Product of 1917.

SUMMARY.—HAMILTON COUNTY.

Showing quantity and value of farm products in the county for 1917 and 1918.

Products.	1917.		1918.	
	Quantity.	Value.	Quantity.	Value.
Field crops.....acres	27,338	\$740,420.48	23,000	\$610,257.18
Animals slaughtered or sold for slaughter.....		29,791.00		28,229.00
Poultry and eggs sold.....		7,710.00		8,908.00
Wool clip.....lbs.	27,071	7,579.88	20,300	10,962.00
Cheese.....lbs.				
Butter.....lbs.	22,284	6,685.20	21,803	8,503.17
Condensed milk.....lbs.				
Milk sold.....		16,171.00		23,136.00
Honey and beeswax.....lbs.	8,525	1,559.50	7,543	1,886.25
Wood marketed.....		583.00		30.00
Totals.....		\$810,500.06		\$691,911.60

Number of cream separators March 1, 1917, 148; March 1, 1918, 142.

Number of silos March 1, 1917, 3; March 1, 1918, 6.

Number of tractors March 1, 1917, 2; March 1, 1918, 15.

HARPER COUNTY.

Organized in 1873; area, 512,126 acres; population, 12,698; rank in population, 53; assessed valuation, \$33,435,933; miles of railroad, main track, 166.79; county seat, Anthony; population, 2,316.

POPULATION AND VALUATION.—HARPER COUNTY.

Table showing total population, by townships and cities, for 1917 and 1918, and the assessed valuation of the municipal townships and cities of 1918.

Townships (and cities).	Population.		Assessed valuation of property, 1918.				
	1917.	1918.	Land.	City lots.	Personal.	Railroad, etc.	Total.
The county.....	13,308	12,698	\$17,848,805	\$2,916,174	\$7,722,710	\$4,948,244	\$33,435,933
Anthony.....	2,546	2,316		\$1,626,525	\$1,246,655	\$187,853	\$3,061,033
Anthony tp.....	737	747	\$1,526,930	17,300	409,720	803,457	2,757,407
Harper.....	1,336	1,098		775,050	534,525	150,027	1,459,602
Banner tp.....	438	440	952,080		217,850	551,330	1,721,260
Berlin tp.....	344	322	921,615		212,315	134,873	1,268,803
Blaine tp.....	458	421	768,910	20,325	339,210	158,573	1,287,018
Chicaskia tp.....	297	288	653,260	720	172,980	52,304	879,264
Waldron.....	211	180		51,034	78,780	47,258	177,072
Eagle tp.....	476	469	1,105,455		277,720	473,957	1,857,132
Empire tp.....	263	260	800,250		233,620		1,033,870
Garden tp.....	259	270	614,420		187,580		802,000
Grant tp.....	461	457	772,725	15,715	255,535	231,550	1,275,525
Green tp.....	333	313	451,010	4,235	126,270	292,523	874,038
Harper tp.....	446	424	889,010	6,965	276,065	134,031	1,306,071
Lake tp.....	240	199	445,730	5,140	193,100	119,765	763,735
Lawn tp.....	373	364	701,970		254,600	304,537	1,261,107
Liberty tp.....	284	280	579,010		227,840	468	807,318
Odell tp.....	510	528	1,005,380	28,185	385,280	357,397	1,776,242
Pilot Knob tp.....	460	438	1,001,595		259,795	266,165	1,527,555
Attica.....	650	705		217,970	364,125	80,087	662,182
Ruella tp.....	209	252	450,735	9,375	168,435	10,893	639,438
Freeport.....	119	126		39,607	65,960	21,808	127,375
Silver Creek tp.....	343	462	1,025,700		285,640	254,427	1,565,767
Spring tp.....	533	514	1,337,890	3,163	392,075	265,048	1,998,176
Bluff City.....	264	227		94,865	177,040	8,623	280,528
Stohrville tp.....	718	691	1,845,130		379,995	41,290	2,266,415

LIVESTOCK.—HARPER COUNTY.

Table showing number, value and mortality of livestock in the county for 1917 and 1918.

Livestock.	1917.		1918.		Mortality.	
	Number.	Value.	Number.	Value.	1917.	1918.
Horses.....	11,913	\$1,429,560.00	11,755	\$1,304,805.00	259	330
Mules and asses.....	4,123	556,605.00	3,904	546,560.00	31	45
Milk cows.....	4,699	352,425.00	5,440	446,080.00	86	153
Other cattle.....	24,019	1,200,950.00	23,795	1,284,930.00	380	756
Sheep.....	247	2,717.00	840	10,500.00	6	22
Swine.....	11,472	235,176.00	8,812	198,270.00	332	519
Totals.....	56,473	\$3,777,433.00	54,546	\$3,791,145.00	1,094	1,825

Number of dogs in county March 1, 1917, 1,575; March 1, 1918, 1,527.

Number of sheep killed by dogs, year ending March 1, 1917, 3.

Number of sheep killed by wolves, year ending March 1, 1917, 1.

Mortality of swine from cholera, year ending March 1, 1917, 158; March 1, 1918, 279.

FARM AND CROP STATISTICS.—HARPER COUNTY.

Table showing acres, product and value of field crops in the county for 1917 and 1918.

Crops.	1917.			1918.		
	Acres.	Product.	Value.	Acres.	Product.	Value.
Winter wheat.....bu.	175,149	2,101,788	\$4,413,754.80	170,768	2,561,520	\$5,123,040.00
Spring wheat.....bu.						
Corn.....bu.	61,852	247,408	299,363.68	37,717	113,151	165,200.46
Oats.....bu.	17,889	232,557	158,138.76	30,900	741,600	541,368.00
Rye.....bu.	2,735	32,820	57,435.00	1,186	17,790	28,464.00
Barley.....bu.	47	940	940.00	77	2,156	2,371.60
Emmer ("speltz").....bu.						
Irish potatoes.....bu.	263	17,358	27,772.80	290	1,450	2,392.50
Sweet potatoes.....bu.	7	560	1,008.00			
Cowpeas.....tons	35	44	704.00	3	5	82.50
Flax.....bu.				4	16	52.00
Broom corn.....lbs.						
Millet.....tons	524	1,048	10,480.00	670	1,005	12,060.00
Sugar beets.....tons						
Sorghum for syrup.....gals.	34	680	476.00	76	1,520	1,672.00
for seed.....bu.	495	7,425	10,766.25	962	9,620	19,240.00
for hay.....tons	1,417	4,960	24,800.00	3,821	11,463	80,241.00
Milo for grain.....bu.	18,291	22,863.75	4,546	54,552	84,555.60	
for stover*.....tons		3,165	12,664.00		11,365	56,825.00
for hay.....tons	115	287	1,435.00	126	315	2,047.50
Kafir for grain.....bu.	18,994	208,934	290,418.26	29,895	298,950	448,425.00
for stover*.....tons		42,736	170,944.00		67,264	336,320.00
for hay.....tons	3,483	9,579	47,895.00	3,422	8,555	59,885.00
Feterita for grain.....bu.	751	9,012	11,715.60	1,701	22,113	33,169.50
for stover*.....tons		1,502	6,008.00		3,402	17,010.00
for hay.....tons	223	558	3,348.00	570	1,425	9,975.00
Sudan grass.....tons	1,276	3,509	28,072.00	2,359	4,718	47,180.00
Jerusalem corn.....tons	78	214	1,070.00	5	13	91.00
Alfalfa.....tons	10,497	27,292	463,964.00	11,087	22,174	443,480.00
Timothy.....tons						
Clover.....tons						
Blue grass.....tons				7		
Sweet clover.....tons	150	† 250	3,750.00	80	‡ 80	1,520.00
Orchard grass.....tons	7					
Other tame grasses.....tons	100			21		
Prairie hay.....tons	2,166	2,166	28,158.00	2,249	1,687	26,992.00
Totals.....	299,694		\$6,097,944.90	302,542		\$7,543,659.66

Corn on hand March 1, 1917, 114,825 bushels; March 1, 1918, 37,270 bushels.

Wheat on hand March 1, 1917, 48,990 bushels; March 1, 1918, 148,141 bushels.

Prairie grass for pasture March 1, 1918: Acres fenced, 108,794; acres not fenced, 630.

* Forage after harvesting grain. † Product of 1916. ‡ Product of 1917.

SUMMARY.—HARPER COUNTY.

Showing quantity and value of farm products in the county for 1917 and 1918:

Products.	1917.		1918.	
	Quantity.	Value.	Quantity.	Value.
Field crops.....acres	299,694	\$6,097,944.90	302,542	\$7,543,659.66
Animals slaughtered or sold for slaughter.....		416,242.00		527,182.00
Poultry and eggs sold.....		130,473.00		121,069.00
Wool clip.....lbs.	1,705	477.40	823	444.42
Cheese.....lbs.	960	163.20		
Butter.....lbs.	268,592	83,061.03	161,834	63,984.15
Condensed milk.....lbs.				
Milk sold.....		70,995.00		96,959.00
Honey and beeswax.....lbs.	795	143.10	484	121.00
Wood marketed.....		20.00		35.00
Totals.....		\$6,799,519.63		\$8,353,454.23

Number of cream separators March 1, 1917, 740; March 1, 1918, 775.

Number of silos March 1, 1917, 87; March 1, 1918, 91.

Number of tractors March 1, 1917, 37; March 1, 1918, 62.

HARVEY COUNTY.

Organized in 1872; area, 344,779 acres; population, 18,769; rank in population, 28; assessed valuation, \$40,954,763; miles of railroad, main track, 85.34; county seat, Newton; population, 8,183.

POPULATION AND VALUATION.—HARVEY COUNTY.

Table showing total population, by townships and cities, for 1917 and 1918, and the assessed valuation of the municipal townships and cities of 1918.

Townships (and cities).	Population.		Assessed valuation of property, 1918.				
	1917.	1918.	Land.	City lots.	Personal.	Railroad, etc.	Total.
The county.....	18,432	18,769	\$18,317,002	\$6,187,812	\$10,433,326	\$6,016,623	\$40,954,763
Alta tp.....	532	551	\$1,134,605		\$369,676		\$1,504,281
Burrton.....	636	558		\$225,860	328,914	\$120,417	675,191
Burrton tp.....	460	479	937,915		309,940	610,492	1,858,347
Darlington tp.....	487	459	1,304,965	925	297,787	40,368	1,644,045
Emma tp.....	929	885	1,383,960	102,826	695,188	255,583	2,437,557
Garden tp.....	543	562	1,328,545		317,909	796	1,647,250
Halstead.....	1,077	1,057		713,760	1,238,342	134,827	2,086,929
Halstead tp.....	587	604	1,248,525		263,224	451,469	1,963,218
Highland tp.....	516	540	1,272,681		372,154	166,005	1,810,840
Lake tp.....	405	432	897,315	3,450	321,627	287,257	1,509,649
Lakin tp.....	466	466	1,172,935		298,905	25,404	1,497,244
Macon tp.....	493	513	1,373,190		500,031	629,102	2,502,323
Newton.....	7,720	8,183		4,674,720	2,738,239	835,943	8,248,902
Newton tp.....	736	703	1,452,740	37,090	764,682	844,286	3,098,798
Pleasant tp.....	567	541	1,228,608	2,724	350,328	5,017	1,586,677
Richland tp.....	451	426	1,153,226	3,641	234,419	407,930	1,799,216
Sedgwick.....	674	630		352,235	314,720	107,461	774,416
Sedgwick tp.....	556	546	1,322,362	381	352,086	490,107	2,164,936
Walton.....	204	219		70,200	125,413	23,745	219,358
Walton tp.....	393	415	1,105,430		239,742	580,414	1,925,586

LIVESTOCK.—HARVEY COUNTY.

Table showing number, value and mortality of livestock in the county for 1917 and 1918.

Livestock.	1917.		1918.		Mortality.	
	Number.	Value.	Number	Value.	1917.	1918.
Horses.....	10,284	\$1,234,080.00	9,931	\$1,102,341.00	175	254
Mules and asses.....	2,243	303,805.00	2,255	315,700.00	17	20
Milk cows.....	5,656	424,200.00	6,431	527,342.00	58	163
Other cattle.....	16,790	839,500.00	14,491	782,514.00	227	588
Sheep.....	3,304	36,344.00	5,221	65,262.50	108	97
Swine.....	15,707	321,993.50	16,117	362,632.50	338	841
Totals.....	53,984	\$3,159,922.50	54,446	\$3,155,792.00	923	1,963

Number of dogs in county March 1, 1917, 1,312; March 1, 1918, 1,272.

Number of sheep killed by dogs, year ending March 1, 1918, 28.

Number of sheep killed by wolves, year ending March 1, 1917, 11; March 1, 1918, 8.

Mortality of swine from cholera, year ending March 1, 1917, 141; March 1, 1918, 382.

FARM AND CROP STATISTICS.—HARVEY COUNTY.

Table showing acres, product and value of field crops in the county for 1917 and 1918.

Crops.	1917.			1918.		
	Acres.	Product.	Value.	Acres.	Product.	Value.
Winter wheat.....bu.	71,245	1,068,675	\$2,212,157.25	102,736	1,643,776	\$3,287,552.00
Spring wheat.....bu.	203	2,639	5,304.39			
Corn.....bu.	74,095	1,185,520	1,304,072.00	52,290	313,740	464,335.20
Oats.....bu.	44,486	1,245,608	772,276.96	33,985	713,685	520,990.05
Rye.....bu.	3,247	45,458	76,824.02	4,192	62,880	97,464.00
Barley.....bu.	563	12,949	12,949.00	694	13,880	15,268.00
Emmer ("speltz").....bu.						
Irish potatoes.....bu.	431	25,860	38,790.00	496	19,344	30,176.64
Sweet potatoes.....bu.	56	5,600	9,128.00	20	1,560	2,808.00
Cowpeas.....tons	61	76	1,216.00	52	78	1,287.00
Flax.....bu.						
Broom corn.....lbs.	2	800	116.00	33	9,900	990.00
Millet.....tons	227	341	3,751.00	136	204	2,448.00
Sugar beets.....tons	1	9	49.50			
Sorghum for syrup.....gals.	14	350	245.00	36	1,440	1,584.00
for seed.....bu.	109	2,071	3,520.70	507	4,563	8,669.70
for hay.....tons	2,621	6,553	45,871.00	2,081	7,284	50,988.00
Milo for grain.....bu.	12	240	336.00	136	2,040	3,264.00
for stover*.....tons		30	120.00		204	816.00
for hay.....tons	3	8	192.00	5	10	60.00
Kafir for grain.....bu.	4,804	100,884	141,237.60	3,383	27,064	43,302.40
for stover*.....tons		19,216	76,864.00		9,303	46,515.00
for hay.....tons	229	458	2,977.00	292	876	5,694.00
Feterita for grain.....bu.	90	2,250	3,600.00	114	1,482	2,297.10
for stover*.....tons		270	1,080.00		285	1,140.00
for hay.....tons	27	81	648.00	32	96	576.00
Sudan grass.....tons	253	569	5,690.00	628	1,884	18,840.00
Jerusalem corn.....tons	11	22	143.00	33	99	643.50
Alfalfa.....tons	16,136	41,954	713,218.00	15,968	35,928	790,416.00
Timothy.....tons	16			20		
Clover.....tons	10					
Blue grass.....tons	24			30		
Sweet clover.....tons	320	† 270	4,320.00	65	‡ 100	2,000.00
Orchard grass.....tons	2					
Other tame grasses.....tons						
Prairie hay.....tons	11,373	11,373	147,849.00	10,346	7,760	131,920.00
Totals.....	230,671		\$5,584,545.42	228,310		\$5,532,044.59

Corn on hand March 1, 1917, 111,680 bushels; March 1, 1918, 267,244 bushels.

Wheat on hand March 1, 1917, 47,699 bushels; March 1, 1918, 61,841 bushels.

Prairie grass for pasture March 1, 1918: Acres fenced, 55,409; acres not fenced, 1,440.

* Forage after harvesting grain. † Product of 1916. ‡ Product of 1917.

SUMMARY.—HARVEY COUNTY.

Showing quantity and value of farm products in the county for 1917 and 1918.

Products.	1917.		1918.	
	Quantity.	Value.	Quantity.	Value.
Field crops.....acres	230,671	\$5,584,545.42	228,310	\$5,532,044.59
Animals slaughtered or sold for slaughter.....		749,630.00		1,033,784.00
Poultry and eggs sold.....		186,929.00		188,120.00
Wool clip.....lbs.	10,000	2,800.00	10,628	5,739.12
Cheese.....lbs.	660	112.20	687	123.66
Butter.....lbs.	419,048	129,744.60	506,109	204,707.40
Condensed milk.....lbs.				
Milk sold.....		114,025.00		182,115.00
Honey and beeswax.....lbs.	10,121	1,843.38	4,556	1,139.10
Wood marketed.....		439.00		689.00
Totals.....		\$6,770,068.60		\$7,148,461.87

Number of cream separators March 1, 1917, 1,014; March 1, 1918, 1,022.

Number of silos March 1, 1917, 113; March 1, 1918, 120.

Number of tractors March 1, 1917, 77; March 1, 1918, 142.

HASKELL COUNTY.

Organized in 1887; area, 368,228 acres; population, 1,720; rank in population, 102; assessed valuation, \$4,958,111; miles of railroad, main track, 26.68; county seat, Santa Fe.

POPULATION AND VALUATION.—HASKELL COUNTY.

Table showing total population, by townships and cities, for 1917 and 1918, and the assessed valuation of the municipal townships and cities of 1918.

Townships (and cities).	Population.		Assessed valuation of property, 1918.				
	1917.	1918.	Land.	City lots.	Personal.	Railroad, etc.	Total.
The county.....	1,625	1,720	\$3,344,565	\$101,020	\$998,197	\$514,329	\$4,958,111
Dudley tp.....	525	581	\$930,238	\$54,951	\$338,528	\$203,925	\$1,527,642
Haskell tp.....	600	589	1,207,218	46,069	433,230	162,053	1,848,570
Lockport tp.....	500	550	1,207,109	.....	226,439	148,351	1,581,899

LIVESTOCK.—HASKELL COUNTY.

Table showing number, value and mortality of livestock in the county for 1917 and 1918.

Livestock.	1917.		1918.		Mortality.	
	Number.	Value.	Number.	Value.	1917.	1918.
Horses.....	2,802	\$336,240.00	3,065	\$340,215.00	60	27
Mules and asses.....	397	53,595.00	300	42,000.00	7	2
Milk cows.....	315	23,625.00	1,003	82,246.00	.....	4
Other cattle.....	7,652	382,600.00	5,671	306,234.00	63	24
Sheep.....	509	5,599.00	1,855	23,187.50	.....	4
Swine.....	634	12,997.00	498	11,205.00	79	15
Totals.....	12,309	\$814,656.00	12,392	\$805,087.50	209	76

Number of dogs in county March 1, 1917, 212; March 1, 1918, 82.

Mortality of swine from cholera, year ending March 1, 1918, 6.

FARM AND CROP STATISTICS.—HASKELL COUNTY.

Table showing acres, product and value of field crops in the county for 1917 and 1918.

Crops.	1917.			1918.		
	Acres.	Product.	Value.	Acres.	Product.	Value.
Winter wheat.....bu.	1,350	4,050	\$8,626.50	9,982	29,946	\$59,293.08
Spring wheat.....bu.						
Corn.....bu.	5,687	5,687	7,108.75	6,650	13,300	19,950.00
Oats.....bu.	4,097			5,149	10,298	7,723.50
Rye.....bu.	100			33	132	217.80
Barley.....bu.	13,310	39,930	39,930.00	4,783	19,132	18,175.40
Emmer ("speltz").....bu.						
Irish potatoes.....bu.	17	170	280.50	16	160	240.00
Sweet potatoes.....bu.						
Cowpeas.....tons						
Flax.....bu.						
Broom corn.....lbs.	128	38,400	5,184.00	1,051	341,575	34,157.50
Millet.....tons				167	167	1,837.00
Sugar beets.....tons						
Sorghum for syrup.....gals.						
for seed.....bu.	825	4,950	7,672.50	6,734	53,872	96,969.60
for hay.....tons	3,777	3,777	30,216.00	5,589	8,384	75,456.00
Milo for grain.....bu.	12,937	103,496	175,943.20	12,347	123,470	179,031.50
for stover*.....tons		6,468	32,340.00		12,347	55,561.50
for hay.....tons	277	208	1,456.00	80	80	520.00
Kafir for grain.....bu.	12,781	51,124	76,686.00	8,785	70,280	105,420.00
for stover*.....tons		12,781	63,905.00		15,374	76,870.00
for hay.....tons	295	443	4,430.00			
Feterita for grain.....bu.	1,823	12,761	19,141.50	2,897	23,176	33,141.68
for stover*.....tons		1,368	6,840.00		3,621	18,105.00
for hay.....tons				526	658	4,606.00
Sudan grass.....tons	129	194	1,940.00	534	1,068	11,748.00
Jerusalem.....tons						
Alfalfa.....tons				3	5	105.00
Timothy.....tons						
Clover.....tons						
Blue grass.....tons						
Sweet clover.....tons						
Orchard grass.....tons						
Other tame grasses.....tons						
Prairie hay.....tons						
Totals.....	57,533		\$481,699.95	65,326		\$799,128.56

Corn on hand March 1, 1917, 15 bushels; March 1, 1918, 175 bushels.

Wheat on hand March 1, 1918, 212 bushels.

Prairie grass for pasture March 1, 1918: Acres fenced, 53,800; acres not fenced, 3,710.

* Forage after harvesting grain. † Product of 1916. ‡ Product of 1917.

SUMMARY.—HASKELL COUNTY.

Showing quantity and value of farm products in the county for 1917 and 1918.

Products.	1917.		1918.	
	Quantity.	Value.	Quantity.	Value.
Field crops.....acres	57,533	\$481,699.95	65,326	\$799,128.56
Animals slaughtered or sold for slaughter.....		43,695.00		81,235.00
Poultry and eggs sold.....		13,105.00		8,897.00
Wool clip.....lbs.				
Cheese.....lbs.				
Butter.....lbs.	21,460	6,438.00	12,953	5,051.67
Condensed milk.....lbs.				
Milk sold.....		1,575.00		14,184.00
Honey and beeswax.....lbs.				
Wood marketed.....				
Totals.....		\$546,512.95		\$908,496.23

Number of cream separators March 1, 1917, 146; March 1, 1918, 135.

Number of silos March 1, 1917, 5; March 1, 1918, 2.

Number of tractors March 1, 1917, 36; March 1, 1918, 17.

HODGEMAN COUNTY.

Organized in 1879; area, 549,984 acres; population, 3,739; rank in population, 92; assessed valuation, \$11,703,175; miles of railroad, main track, 19.89; county seat, Jetmore; population, 470.

POPULATION AND VALUATION.—HODGEMAN COUNTY.

Table showing total population, by townships and cities, for 1917 and 1918, and the assessed valuation of the municipal townships and cities of 1918.

Townships (and cities).	Population.		Assessed valuation of property, 1918.				
	1917.	1918.	Land.	City lots.	Personal.	Railroad, etc.	Total.
The county.....	3,845	3,739	\$8,777,870	\$245,710	\$2,022,350	\$657,245	\$11,703,175
Benton tp.....	116	127	\$300,380		\$46,335		\$346,715
Jetmore.....	540\ 990	470\ 989		\$193,675	282,930	\$24,125	500,730
Center tp.....	450\ 990	519\ 989	1,391,415		273,565	184,226	1,849,206
Hallet tp.....	245	246	553,285		128,345		681,630
Hanston.....	214\ 930	* 873\ 873	1,841,320	52,035	403,675	446,802	2,743,832
Marena tp.....	716\ 930	873\ 873	751,115		139,655		890,770
North Roscoe tp..	157	156	672,135		90,685		762,820
South Roscoe tp..	265	245	714,630		148,400	642	863,672
Sawlog tp.....	318	279	1,896,660		341,350	1,450	2,239,460
Sterling tp.....	602	587	656,930		167,410		824,340
Valley tp.....	222	237					

* Not reported separately from township in 1918.

LIVESTOCK.—HODGEMAN COUNTY.

Table showing number, value and mortality of livestock in the county for 1917 and 1918.

Livestock.	1917.		1918.		Mortality.	
	Number.	Value.	Number.	Value.	1917.	1918.
Horses.....	6,662	\$799,440.00	7,009	\$777,999.00	123	153
Mules and asses.....	1,356	183,060.00	1,046	146,440.00	6	12
Milk cows.....	2,445	183,375.00	2,744	225,008.00	28	76
Other cattle.....	22,033	1,101,650.00	19,585	1,057,590.00	296	338
Sheep.....	391	4,301.00	925	11,562.50		
Swine.....	2,734	56,047.00	1,645	37,012.50	107	87
Totals.....	35,621	\$2,327,873.00	32,954	\$2,255,612.00	560	666

Number of dogs in county March 1, 1917, 471; March 1, 1918, 492.

Number of sheep killed by wolves, year ending March 1, 1917, 10.

Mortality of swine from cholera, year ending March 1, 1917, 26; March 1, 1918, 35.

FARM AND CROP STATISTICS.—HODGEMAN COUNTY.

Table showing acres, product and value of field crops in the county for 1917 and 1918.

Crops.	1917.			1918.		
	Acres.	Product.	Value.	Acres.	Product.	Value.
Winter wheat.....bu.	10,542	52,710	\$111,745.20	20,425	61,275	\$119,486.25
Spring wheat.....bu.						
Corn.....bu.	59,683	59,683	71,619.60	35,353	70,706	102,523.70
Oats.....bu.	11,594			13,334	13,334	10,000.50
Rye.....bu.	1,288	3,864	6,762.00	2,863	5,726	9,333.38
Barley.....bu.	26,947			16,890	33,780	33,104.40
Emmer ("speltz").....bu.	25					
Irish potatoes.....bu.	98	2,254	3,944.50	93	837	1,389.42
Sweet potatoes.....bu.				2	8	18.00
Cowpeas.....tons	10	12	192.00			
Flax.....bu.	5					
Broom corn.....lbs.	5	1,500	195.00	60	18,000	1,980.00
Millet.....tons	557	557	5,570.00	990	743	8,916.00
Sugar beets.....tons						
Sorghum for syrup.....gals.						
for seed.....bu.	1,248	4,992	8,087.04	3,677	11,031	19,855.80
for hay.....tons	19,493	19,493	175,437.00	18,728	18,728	187,280.00
Milo for grain.....bu.	5,346	32,076	48,114.00	10,403	41,612	64,498.60
for stover*.....tons		5,346	26,730.00		7,802	54,614.00
for hay.....tons	70	70	525.00	12	12	102.00
Kafir for grain.....bu.	27,406	27,406	41,109.00	22,097	44,194	68,500.70
for stover*.....tons		27,406	137,030.00		33,146	281,741.00
for hay.....tons	553	553	4,977.00	45	68	680.00
Feterita for grain.....bu.	6,819	20,457	26,594.10	6,185	12,370	18,555.00
for stover*.....tons		6,819	34,095.00		4,639	30,153.50
for hay.....tons	275	275	2,200.00	200	200	1,700.00
Sudan grass.....tons	472	472	5,192.00	1,670	1,670	16,700.00
Jerusalem corn.....tons	5	5	45.00	20	30	300.00
Alfalfa.....tons	1,905	4,763	95,260.00	1,765	3,530	67,070.00
Timothy.....tons						
Clover.....tons						
Blue grass.....tons						
Sweet clover.....tons	30	†		5	†	
Orchard grass.....tons						
Other tame grasses.....tons						
Prairie hay.....tons	1,830	915	12,810.00	675	338	5,070.00
Totals.....	176,206		\$818,233.44	155,492		\$1,103,572.25

Corn on hand March 1, 1917, 11,905 bushels; March 1, 1918, 2,763 bushels.

Wheat on hand March 1, 1917, 22,225 bushels; March 1, 1918, 6,990 bushels.

Prairie grass for pasture March 1, 1918: Acres fenced, 266,657; acres not fenced, 14,215.

* Forage after harvesting grain. † Product of 1916. ‡ Product of 1917.

SUMMARY.—HODGEMAN COUNTY.

Showing quantity and value of farm products in the county for 1917 and 1918.

Products.	1917.		1918.	
	Quantity.	Value.	Quantity.	Value.
Field crops.....acres	176,206	\$818,233.44	155,492	\$1,103,572.25
Animals slaughtered or sold for slaughter.....		134,060.00		228,544.00
Poultry and eggs sold.....		49,567.00		45,614.00
Wool clip.....lbs.	4,830	1,352.40	1,478	798.12
Cheese.....lbs.				
Butter.....lbs.	44,726	13,417.80	59,723	23,291.97
Condensed milk.....lbs.				
Milk sold.....		40,580.00		65,317.00
Honey and beeswax.....lbs.				
Wood marketed.....		396.00		35.00
Totals.....		\$1,057,606.64		\$1,467,172.34

Number of cream separators March 1, 1917, 329; March 1, 1918, 432.

Number of silos March 1, 1917, 29; March 1, 1918, 23.

Number of tractors March 1, 1917, 38; March 1, 1918, 39.

JACKSON COUNTY.

Organized in 1857; area, 420,191 acres; population, 14,668; rank in population, 46; assessed valuation, \$35,780,945; miles of railroad, main track, 107.27; county seat, Holton; population, 2,645.

POPULATION AND VALUATION.—JACKSON COUNTY.

Table showing total population, by townships and cities, for 1917 and 1918, and the assessed valuation of the municipal townships and cities of 1918.

Townships (and cities).	Population.		Assessed valuation of property, 1918.				
	1917.	1918.	Land.	City lots.	Personal.	Railroad, etc.	Total.
The county	15,208	14,668	\$20,771,715	\$2,909,915	\$9,072,865	\$3,026,450	\$35,780,945
Adrian tp.	448	422	\$848,308		\$276,655	\$1,557	\$1,126,520
Banner tp.	461	492	1,135,100		432,665	2,813	1,570,578
Denison	211	223		\$110,675	134,880	6,709	252,264
Mayetta	256	236	1,288	112,685	168,725	17,760	299,170
Cedar tp.	815	829	1,397,941		398,175	210,369	2,006,485
Hoyt	279	287		118,075	164,970	12,906	295,951
Douglas tp.	945	971	2,131,031		604,680	264,666	3,000,377
Holton	2,713	2,645		1,961,680	1,287,535	87,980	3,337,195
Franklin tp.	728	691	1,610,398	4,410	408,330	387,532	2,410,670
Garfield tp.	794	753	1,315,490	12,145	474,305	139,582	1,941,522
Grant tp.	691	704	1,087,154		354,340	3,786	1,445,280
Circleville	279	226		74,575	157,340	16,434	248,349
Jefferson tp.	758	773	1,327,004		442,235	241,936	2,011,175
Liberty tp.	627	636	1,499,995		450,980	243,142	2,194,117
Lincoln tp.	847	429	1,078,262		593,260	208	1,671,730
Netawaka	278	299		136,015	178,785	65,460	380,260
Netawaka tp.	506	544	1,404,115		372,120	189,023	1,965,258
Soldier	327	290		139,675	216,985	8,031	364,691
Soldier tp.	743	726	1,535,625		378,090	147,903	2,061,618
Straight Creek tp.	608	585	1,243,384	100	403,315	184,472	1,831,271
Washington tp.	908	969	1,755,547	55,425	470,415	271,808	2,553,195
Whiting	383	390		184,455	266,000	71,012	521,467
Whiting tp.	603	548	1,402,361		438,080	451,361	2,291,802

LIVESTOCK.—JACKSON COUNTY.

Table showing number, value and mortality of livestock in the county for 1917 and 1918.

Livestock.	1917.		1918.		Mortality.	
	Number.	Value.	Number.	Value.	1917.	1918.
Horses	11,907	\$1,428,840.00	12,344	\$1,370,184.00	188	143
Mules and asses	2,615	353,025.00	2,387	334,180.00	21	21
Milk cows	8,359	626,925.00	10,326	846,732.00	99	228
Other cattle	21,340	1,067,000.00	19,339	1,044,306.00	465	716
Sheep	1,192	13,112.00	2,090	26,125.00	51	53
Swine	25,196	516,518.00	27,110	609,975.00	1,901	3,812
Totals	70,609	\$4,005,420.00	73,596	\$4,231,502.00	2,725	4,973

Number of dogs in county March 1, 1917, 1,854; March 1, 1918, 1,734.

Number of sheep killed by dogs, year ending March 1, 1917, 32; March 1, 1918, 7.

Number of sheep killed by wolves, year ending March 1, 1917, 6; March 1, 1918, 4.

Mortality of swine from cholera, year ending March 1, 1917, 1,351; March 1, 1918, 3,323.

FARM AND CROP STATISTICS.—JACKSON COUNTY.

Table showing acres, product and value of field crops in the county for 1917 and 1918.

Crops.	1917.			1918.		
	Acres.	Product.	Value.	Acres.	Product.	Value.
Winter wheat.....bu.	18,279	274,185	\$553,853.70	46,766	701,490	\$1,431,039.60
Spring wheat.....bu.	13	195	386.10	50	575	1,150.00
Corn.....bu.	111,070	2,332,470	2,659,015.80	88,588	1,328,820	1,847,059.80
Oats.....bu.	37,848	1,589,616	906,081.12	37,914	796,194	525,488.04
Rye.....bu.	155	2,170	3,537.10	325	4,550	7,507.50
Barley.....bu.	30	810	810.00	49	980	1,029.00
Emmer ("speltz").....bu.	6	228	141.36	7	133	94.43
Irish potatoes.....bu.	986	68,034	98,649.30	1,003	38,114	57,933.28
Sweet potatoes.....bu.						
Cowpeas.....tons	25	31	496.00	2	3	49.50
Flax.....bu.				1	6	19.50
Broom corn.....lbs.	5	1,500	210.00	1	250	25.00
Millet.....tons	1,828	3,656	40,216.00	1,353	3,044	36,528.00
Sugar beets.....tons						
Sorghum for syrup.....gals.	92	6,440	4,508.00	75	5,250	5,775.00
for seed.....bu.	28	252	403.20	83	1,245	2,303.25
for hay.....tons	1,501	6,004	36,024.00	1,136	3,408	27,264.00
Milo for grain.....bu.	42	630	882.00	40	640	992.00
for stover*.....tons		105	420.00		120	720.00
for hay.....tons	32	96	576.00	15	49	392.00
Kafir for grain.....bu.	1,654			2,038	40,760	65,216.00
for stover*.....tons		6,616	26,464.00		8,152	65,216.00
for hay.....tons	469	1,641	8,205.00	44	176	1,760.00
Feterita for grain.....bu.	68	650	884.00	206	3,090	4,789.50
for stover*.....tons		272	1,088.00		618	3,399.00
for hay.....tons	100	300	1,800.00	70	210	1,575.00
Sudan grass.....tons	36	144	1,296.00	37	111	1,110.00
Jerusalem corn.....tons	3	10	50.00			
Alfalfa.....tons	13,353	40,059	721,062.00	14,231	24,904	597,696.00
Timothy.....tons	14,165			14,439		
Clover.....tons	6,617			4,210		
Blue grass.....tons	21,785	† 19,400	310,400.00	18,004	‡ 13,350	293,700.00
Sweet clover.....tons	276			196		
Orchard grass.....tons	11			5		
Other tame grasses.....tons	980			10,226		
Prairie hay.....tons	17,163	17,163	240,282.00	14,384	10,788	204,972.00
Totals.....	248,620		\$5,617,740.68	255,498		\$5,184,803.40

Corn on hand March 1, 1917, 215,950 bushels; March 1, 1918, 689,914 bushels.

Wheat on hand March 1, 1917, 12,517 bushels; March 1, 1918, 13,741 bushels.

Prairie grass for pasture March 1, 1918: Acres fenced, 68,810; acres not fenced, 75.

* Forage after harvesting grain. † Product of 1916. ‡ Product of 1917.

SUMMARY.—JACKSON COUNTY.

Showing quantity and value of farm products in the county for 1917 and 1918.

Products.	1917.		1918.	
	Quantity.	Value.	Quantity.	Value.
Field crops.....acres	248,620	\$5,617,740.68	255,498	\$5,184,803.40
Animals slaughtered or sold for slaughter.....		1,194,686.00		1,582,837.00
Poultry and eggs sold.....		207,276.00		219,266.00
Wool clip.....lbs.	3,140	879.20	4,424	2,388.96
Cheese.....lbs.	158	26.86		
Butter.....lbs.	217,737	65,321.10	202,572	79,003.08
Condensed milk.....lbs.				
Milk sold.....		157,181.00		198,754.00
Honey and beeswax.....lbs.	24,181	4,371.68	4,819	1,206.00
Wood marketed.....		913.00		1,724.00
Totals.....		\$7,248,395.52		\$7,269,982.44

Number of cream separators March 1, 1917, 1,117; March 1, 1918, 1,129.

Number of silos March 1, 1917, 126; March 1, 1918, 106.

Number of tractors March 1, 1917, 25; March 1, 1918, 40.

JEFFERSON COUNTY.

Organized in 1855; area, 359,154 acres; population, 15,063; rank in population, 43; assessed valuation, \$35,392,024; miles of railroad, main track, 121.33; county seat, Oskaloosa; population, 755.

POPULATION AND VALUATION.—JEFFERSON COUNTY.

Table showing total population, by townships and cities, for 1917 and 1918, and the assessed valuation of the municipal townships and cities of 1918.

Townships (and cities).	Population.		Assessed valuation of property, 1918.				
	1917.	1918.	Land	City lots.	Personal.	Railroad, etc.	Total.
The county.....	15,035	15,063	\$20,985,011	\$2,024,540	\$8,391,865	\$3,990,608	\$35,392,024
Valley Falls.....	1,211	1,163		\$594,225	\$485,220	\$82,656	\$1,162,101
Delaware tp.....	1,495	1,476	\$3,635,540		1,069,975	796,817	5,502,332
Fairview tp.....		636	798,620		271,305		1,069,925
Winchester.....	438	413		167,640	272,070	15,088	454,798
Jefferson tp.....	1,196	1,187	2,535,285	24,130	929,140	248,751	3,737,306
Kaw tp.....		710	1,341,507	16,450	405,020	610,261	2,373,238
Perry.....	367	370		142,655	174,430	105,666	422,751
Kentucky tp.....	832	862	1,692,076		481,115	605,647	2,778,838
Nortonville.....	571	597		264,010	410,485	39,954	714,449
Norton tp.....	585	629	1,757,188		587,180	172,791	2,517,159
Oskaloosa.....	763	755		355,520	256,180	115	611,815
Oskaloosa tp.....	1,094	1,080	2,024,120		528,360	118,822	2,671,302
Ozawie tp.....		996	1,378,206	59,335	407,915	108,262	1,953,718
Meriden.....	438	424		136,660	208,905	36,871	382,436
Rock Creek tp.....	1,068	1,115	1,999,559	23,425	669,925	483,488	3,176,397
Rural tp.....		788	1,209,575	29,010	276,675	475,724	1,990,984
Sarcxie tp.....		536	834,393		195,700	82	1,030,175
McLouth.....	547	558		211,480	321,280	21,642	554,402
Union tp.....	764	759	1,778,942		440,985	67,971	2,287,898

LIVESTOCK.—JEFFERSON COUNTY.

Table showing number, value and mortality of livestock in the county for 1917 and 1918.

Livestock.	1917.		1918.		Mortality.	
	Number.	Value.	Number.	Value.	1917.	1918.
Horses.....	10,565	\$1,267,800.00	10,666	\$1,183,926.00	192	238
Mules and asses.....	2,822	380,970.00	2,614	365,960.00	31	21
Milk cows.....	8,793	659,475.00	9,149	750,218.00	173	239
Other cattle.....	21,696	1,084,800.00	18,474	997,596.00	494	721
Sheep.....	2,157	23,727.00	6,670	83,375.00	116	140
Swine.....	26,985	553,192.50	29,097	654,682.50	1,021	1,877
Totals.....	73,018	\$3,969,964.50	76,670	\$4,035,757.50	2,027	3,236

Number of dogs in county March 1, 1917, 1,838; March 1, 1918, 1,924.

Number of sheep killed by dogs, year ending March 1, 1917, 43; March 1, 1918, 33.

Number of sheep killed by wolves, year ending March 1, 1917, 1; March 1, 1918, 3.

Mortality of swine from cholera, year ending March 1, 1917, 443; March 1, 1918, 1,253.

FARM AND CROP STATISTICS.—JEFFERSON COUNTY.

Table showing acres, product and value of field crops in the county for 1917 and 1918.

Crops.	1917.			1918.		
	Acres.	Product.	Value.	Acres.	Product.	Value.
Winter wheat.....bu.	31,199	499,184	\$1,033,310.88	57,669	1,153,380	\$2,364,429.00
Spring wheat.....bu.				20	360	723.60
Corn.....bu.	81,566	1,794,452	2,027,730.76	61,015	1,220,300	1,696,217.00
Oats.....bu.	31,536	1,387,584	804,798.72	31,015	1,054,510	695,976.60
Rye.....bu.	336	6,384	10,788.96	380	6,840	11,286.00
Barley.....bu.	41	1,230	1,230.00	200	6,000	6,000.00
Emmer ("speltz").....bu.	1	40	25.20	13	390	276.90
Irish potatoes.....bu.	1,556	119,812	161,746.20	1,453	113,334	150,734.22
Sweet potatoes.....bu.	8	560	604.80	3	210	315.00
Cowpeas.....tons						
Flax.....bu.						
Broom corn.....lbs.						
Millet.....tons	504	1,008	11,088.00	178	401	4,411.00
Sugar beets.....tons						
Sorghum for syrup.....gals.	268	18,760	13,132.00	346	25,950	28,545.00
for seed.....bu.	70	560	840.00	47	705	1,339.50
for hay.....tons	585	2,486	12,430.00	371	1,206	9,648.00
Milo for grain.....bu.	127	1,905	2,667.00	48	768	1,190.40
for stover*.....tons		381	1,524.00		144	864.00
for hay.....tons				1	3	22.50
Kafir for grain.....bu.	1,581	17,391	26,956.05	1,207	30,175	48,280.00
for stover*.....tons		5,138	20,552.00		4,225	29,575.00
for hay.....tons	65	260	1,300.00	38	124	1,116.00
Feterita for grain.....bu.	157	2,355	3,061.50	147	2,205	3,528.00
for stover*.....tons		628	1,884.00		441	2,425.50
for hay.....tons	54	162	972.00	20	70	525.00
Sudan grass.....tons	64	256	2,048.00	38	114	1,140.00
Jerusalem corn.....tons	2	8	40.00	10	33	297.00
Alfalfa.....tons	12,339	37,017	777,357.00	14,284	35,710	785,620.00
Timothy.....tons	15,912			11,188		
Clover.....tons	8,099			5,142		
Blue grass.....tons	28,388			31,525		
Sweet clover.....tons	61	† 20,452	357,910.00	25	‡ 12,743	267,603.00
Orchard grass.....tons	283			81		
Other tame grasses.....tons	941			690		
Prairie hay.....tons	9,573	9,573	143,595.00	8,802	8,802	158,436.00
Totals.....	225,316		\$5,417,592.07	225,956		\$6,270,524.22

Corn on hand March 1, 1917, 143,125 bushels; March 1, 1918, 421,446 bushels.

Wheat on hand March 1, 1917, 10,904 bushels; March 1, 1918, 7,441 bushels.

Prairie grass for pasture March 1, 1918: Acres fenced, 30,118; acres not fenced, 348.

* Forage after harvesting grain. † Product of 1916. ‡ Product of 1917.

SUMMARY.—JEFFERSON COUNTY.

Showing quantity and value of farm products in the county for 1917 and 1918.

Products.	1917.		1918.	
	Quantity.	Value.	Quantity.	Value.
Field crops.....acres	225,316	\$5,417,592.07	225,956	\$6,270,524.22
Animals slaughtered or sold for slaughter.....		1,230,475.00		1,953,082.00
Poultry and eggs sold.....		220,925.00		223,222.00
Wool clip.....lbs.	8,181	2,290.68	10,005	5,402.70
Cheese.....lbs.				
Butter.....lbs.	215,338	64,601.40	203,095	79,207.05
Condensed milk.....lbs.	80,242	4,814.52	10,500	942.90
Milk sold.....		187,647.00		221,027.00
Honey and beeswax.....lbs.	45,287	8,161.76	5,719	1,430.40
Wood marketed.....		6,865.00		12,563.00
Totals.....		\$7,143,372.43		\$8,767,401.27

Number of cream separators March 1, 1917, 809; March 1, 1918, 676.

Number of silos March 1, 1917, 147; March 1, 1918, 127.

Number of tractors March 1, 1917, 26; March 1, 1918, 38.

JEWELL COUNTY.

Organized in 1870; area, 586,207 acres; population, 15,963; rank in population, 38; assessed valuation, \$43,462,330; miles of railroad, main track, 76.98; county seat, Mankato; population, 1,020.

POPULATION AND VALUATION.—JEWELL COUNTY.

Table showing total population, by townships and cities, for 1917 and 1918, and the assessed valuation of the municipal townships and cities of 1918.

Townships (and cities).	Population.		Assessed valuation of property, 1918.				
	1917.	1918.	Land.	City lots.	Personal.	Railroad, etc.	Total.
The county	16,601	15,963	\$27,634,980	\$2,498,405	\$10,186,160	\$3,142,785	\$43,462,330
Allen tp.	480	414	\$1,106,045		\$272,740	\$154,240	\$1,533,025
Athens tp.	455	456	1,163,285		615,970	1,269	1,780,524
Browns Creek tp.	477	488	1,193,550		323,600	1,096	1,518,246
Jewell City	800	*		\$604,225	677,590	24,427	1,306,242
Buffalo tp.	523	1,270	1,532,040		381,135	121,236	2,034,411
Burr Oak	659	695		429,540	460,495	28,326	918,361
Burr Oak tp.	545	1,204	1,421,510		358,945	55,816	1,836,271
Calvin tp.	365	358	859,425		307,080	91,467	1,257,972
Mankato	1,148	1,020		721,735	569,825	108,263	1,399,823
Center tp.	502	1,650	1,122,280		269,810	422,389	1,814,479
Erving tp.	409	391	909,830		274,190	2,414	1,186,434
Esbon	284	332		169,425	204,545	20,837	394,807
Esbon tp.	514	474	1,250,130		245,460	300,371	1,795,961
Formoso	364	321		200,340	199,895	39,097	439,332
Grant tp.	592	956	1,263,870		282,655	313,910	1,860,435
Harrison tp.			942,610		300,965	486	1,243,791
Highland tp.	462	447	998,055		260,475	20	1,258,550
Holmwood tp.	437	435	943,280		245,740	34,413	1,223,433
Ionia tp.	681	650	1,085,740	57,675	403,980	278	1,547,673
Jackson tp.	669	614	1,372,490	41,670	381,265	125,534	1,920,959
Limestone tp.	603	643	1,162,030	33,795	375,285	375,063	1,946,173
Montana tp.	476	501	1,035,955		261,575	162,296	1,459,826
Odessa tp.	521	487	805,050		231,265	213	1,036,528
Randall	339	*		163,530	149,165	25,306	338,001
Prairie tp.	504	697	1,324,500		286,075	57,129	1,667,704
Richland tp.	362	434	875,065		243,510	849	1,119,424
Sinclair tp.	634	594	1,118,305	35,125	263,200	329,341	1,745,971
Vicksburg tp.	495	475	1,168,860		276,100	1,580	1,446,540
Walnut tp.	685	643	1,078,550	21,380	395,665	470	1,496,065
Washington tp.	539	481	843,100	19,965	307,490	344,387	1,514,942
White Mound tp.	565	543	1,059,425		360,740	262	1,420,427

* Not reported separately from township in 1918.

LIVESTOCK.—JEWELL COUNTY.

Table showing number, value and mortality of livestock in the county for 1917 and 1918.

Livestock.	1917.		1918.		Mortality.	
	Number.	Value.	Number.	Value.	1917.	1918.
Horses	17,470	\$2,096,400.00	17,079	\$1,895,769.00	312	531
Mules and asses	4,762	642,870.00	4,083	571,620.00	30	31
Milk cows	10,495	787,125.00	11,626	953,332.00	98	186
Other cattle	30,439	1,521,950.00	25,601	1,382,454.00	503	1,056
Sheep	1,171	12,881.00	1,124	14,050.00	9	69
Swine	41,339	847,449.50	51,005	1,147,612.50	2,356	2,393
Totals	105,676	\$5,908,675.50	110,518	\$5,964,837.50	3,308	4,266

Number of dogs in county March 1, 1917, 2,130; March 1, 1918, 2,099.

Number of sheep killed by dogs, year ending March 1, 1917, 3; March 1, 1918, 11.

Mortality of swine from cholera, year ending March 1, 1917, 1,703; March 1, 1918, 699.

FARM AND CROP STATISTICS.—JEWELL COUNTY.

Table showing acres, product and value of field crops in the county for 1917 and 1918.

Crops.	1917.			1918.		
	Acres.	Product.	Value.	Acres.	Product.	Value.
Winter wheat.....bu.	2,123	12,738	\$26,622.42	76,405	1,069,670	\$2,075,159.80
Spring wheat.....bu.				129	1,402	2,691.84
Corn.....bu.	237,456	1,899,648	2,089,612.80	162,025	2,268,350	3,221,057.00
Oats.....bu.	38,327	689,886	427,729.32	26,298	657,450	447,066.00
Rye.....bu.	915	6,405	11,208.75	2,503	35,042	57,819.30
Barley.....bu.	1,913	24,869	24,869.00	2,417	45,923	45,923.00
Emmer ("speltz").....bu.				22	506	369.38
Irish potatoes.....bu.	1,692	64,296	96,444.00	1,541	43,148	61,701.64
Sweet potatoes.....bu.						
Cowpeas.....tons	2	2	32.00	16	24	396.00
Flax.....bu.	10	60	162.00			
Broom corn.....lbs.	39	11,700	1,638.00	44	12,100	1,210.00
Millet.....tons	4,009	4,009	44,099.00	2,546	3,819	45,828.00
Sugar beets.....tons						
Sorghum for syrup.....gals.	112	3,360	2,352.00	133	3,990	4,389.00
for seed.....bu.	486	5,832	10,206.00	1,172	15,236	27,424.80
for hay.....tons	7,815	17,584	175,840.00	7,643	15,286	137,574.00
Milo for grain.....bu.	876	1,752	2,277.60	601	6,010	9,616.00
for stover*.....tons		1,314	6,570.00		902	4,510.00
for hay.....tons	37	74	444.00	15	30	195.00
Kafir for grain.....bu.	4,184	37,656	56,484.00	3,284	32,840	52,544.00
for stover*.....tons		8,368	66,944.00		9,031	63,217.00
for hay.....tons	130	325	2,600.00	65	195	1,657.50
Feterita for grain.....bu.	1,617	19,404	27,165.60	753	9,036	14,005.80
for stover*.....tons		3,234	16,170.00		1,506	7,530.00
for hay.....tons	93	186	1,488.00	206	515	3,605.00
Sudan grass.....tons	100	325	3,250.00	894	2,235	22,350.00
Jerusalem corn.....tons	7	17	136.00	10	30	255.00
Alfalfa.....tons	44,443	93,330	1,773,270.00	46,410	92,820	1,856,400.00
Timothy.....tons				2		
Clover.....tons				12		
Blue grass.....tons				30		
Sweet clover.....tons	284	† 450	6,750.00	587	‡ 530	9,540.00
Orchard grass.....tons	2			21		
Other tame grasses.....tons	177			178		
Prairie hay.....tons	8,520	6,390	89,460.00	9,251	6,938	104,070.00
Totals.....	355,369		\$4,963,824.49	345,213		\$8,278,105.06

Corn on hand March 1, 1917, 664,961 bushels; March 1, 1918, 478,398 bushels.

Wheat on hand March 1, 1917, 37,775 bushels; March 1, 1918, 7,583 bushels.

Prairie grass for pasture March 1, 1918: Acres fenced, 144,830; acres not fenced, 1,677.

* Forage after harvesting grain. † Product of 1916. ‡ Product of 1917.

SUMMARY.—JEWELL COUNTY.

Showing quantity and value of farm products in the county for 1917 and 1918.

Products.	1917.		1918.	
	Quantity.	Value.	Quantity.	Value.
Field crops.....acres	355,369	\$4,963,824.49	345,213	\$8,278,105.06
Animals slaughtered or sold for slaughter.....		1,866,145.00		2,231,042.00
Poultry and eggs sold.....		325,049.00		339,885.00
Wool clip.....lbs.	1,210	338.80	1,638	884.52
Cheese.....lbs.				
Butter.....lbs.	297,905	89,371.50	284,807	111,074.73
Condensed milk.....lbs.				
Milk sold.....		166,509.00		267,374.00
Honey and beeswax.....lbs.	11,060	1,990.80	7,679	1,934.75
Wood marketed.....		125.00		471.00
Totals.....		\$7,413,353.59		\$11,230,771.06

Number of cream separators March 1, 1917, 1,557; March 1, 1918, 1,711.

Number of silos March 1, 1917, 173; March 1, 1918, 226.

Number of tractors March 1, 1917, 38; March 1, 1918, 23.

JOHNSON COUNTY.

Organized in 1855; area, 305,794 acres; population, 17,129; rank in population, 35; assessed valuation, \$44,058,047; miles of railroad, main track, 93.42; county seat, Olathe; population, 3,125.

POPULATION AND VALUATION.—JOHNSON COUNTY.

Table showing total population, by townships and cities, for 1917 and 1918, and the assessed valuation of the municipal townships and cities of 1918.

Townships (and cities).	Population.		Assessed valuation of property, 1918.				
	1917.	1918.	Land.	City lots.	Personal.	Railroad, etc	Total.
The county.....	17,617	17,129	\$24,243,689	\$4,773,989	\$6,458,965	\$8,581,404	\$44,058,047
Aubry tp.....	991	1,035	\$1,908,406	\$54,255	\$433,840	\$832,364	\$3,228,865
Gardner.....	470	464	842	259,165	269,461	41,621	570,247
Gardner tp.....	785	842	1,306	2,209,130	459,855	586,534	3,255,519
De Soto.....	263	245	1,473	128,640	108,980	49,524	287,144
Lexington tp.....	1,155	1,228	2,396,407	7,973	439,600	576,509	3,420,489
Edgerton.....	298	226	943	90,815	104,185	36,851	231,851
McCamish tp.....	1,019	717	1,880,414	44,260	307,200	598,441	2,830,315
Mission tp.....	2,090	2,079	3,734,884	1,030,965	743,898	486,277	5,996,024
Monticello tp.....	1,584	1,035	1,741,504	40,283	368,198	1,472,800	3,622,785
Olathe.....	3,050	3,125	4,336	1,917,540	924,162	302,916	3,044,618
Olathe tp.....	1,239	1,211	3,151,994	47,070	566,558	1,581,678	5,347,300
Oxford tp.....	1,337	1,415	3,229,209	43,738	862,860	815,351	4,951,158
Lenexa.....	359	336	2,435	256,900	74,601	71,908	403,409
Shawnee tp.....	1,894	2,099	2,568,854	572,595	223,102	900,413	4,264,964
Spring Hill.....	528	500	1,072	274,140	260,045	44,190	578,375
Spring Hill tp.....	555	572	1,422,887	5,650	312,420	284,027	2,024,984

LIVESTOCK.—JOHNSON COUNTY.

Table showing number, value and mortality of livestock in the county for 1917 and 1918.

Livestock.	1917.		1918.		Mortality.	
	Number.	Value.	Number.	Value.	1917.	1918.
Horses.....	9,311	\$1,117,320.00	8,995	\$998,445.00	283	285
Mules and asses.....	2,406	324,810.00	2,152	301,280.00	18	33
Milk cows.....	7,480	561,000.00	7,458	611,556.00	152	192
Other cattle.....	13,842	692,100.00	14,885	803,952.00	322	478
Sheep.....	2,521	27,731.00	2,961	37,012.50	155	191
Swine.....	18,842	386,261.00	20,892	470,070.00	422	1,670
Totals.....	54,402	\$3,109,222.00	57,346	\$3,222,315.50	1,352	2,849

Number of dogs in county March 1, 1917, 986; March 1, 1918, 1,651.

Number of sheep killed by dogs, year ending March 1, 1917, 49; March 1, 1918, 49.

Number of sheep killed by wolves, year ending March 1, 1917, 9; March 1, 1918, 25.

Mortality of swine from cholera, year ending March 1, 1917, 308; March 1, 1918, 1,118.

FARM AND CROP STATISTICS.—JOHNSON COUNTY.

Table showing acres, product and value of field crops in the county for 1917 and 1918.

Crops.	1917.			1918.		
	Acres.	Product.	Value.	Acres.	Product.	Value.
Winter bu.....bu.	45,379	907,580	\$1,887,786.40	66,796	1,536,308	\$3,164,794.48
Spring wheat.....bu.	55	990	1,999.80			
Corn.....bu.	55,282	1,326,768	1,459,444.80	41,985	419,850	596,187.00
Oats.....bu.	27,195	1,223,775	709,789.50	27,275	900,075	603,050.25
Rye.....bu.	217	4,123	7,091.56	309	6,489	10,706.85
Barley.....bu.	23	575	586.50	51	1,377	1,377.00
Emmer ("speltz").....bu.	24	960	604.80			
Irish potatoes.....bu.	1,246	140,798	190,077.30	1,054	86,428	110,627.84
Sweet potatoes.....bu.	27	2,970	4,217.40	20	1,760	2,640.00
Cowpeas.....tons	22	27	432.00	20	30	495.00
Flax.....bu.	16	112	302.40	80	560	1,820.00
Broom corn.....lbs.	36	10,800	1,512.00	4	1,200	120.00
Millet.....tons	21	42	420.00	29	58	638.00
Sugar beets.....tons	4			1	6	57.00
Sorghum for syrup.....gals.	15	1,050	735.00	66	4,290	4,719.00
for seed.....bu.	137	2,740	4,384.00	131	1,703	3,065.40
for hay.....tons	178	534	3,738.00	283	931	6,441.50
Milo for grain.....bu.	56	840	1,176.00	48	624	998.40
for stover*.....tons		168	672.00		144	864.00
for hay.....tons	6	18	108.00	6	20	140.00
Kafir for grain.....bu.	878	13,170	20,413.50	666	13,320	21,312.00
for stover*.....tons		2,634	13,170.00		1,998	11,988.00
for hay.....tons	39	117	819.00	10	30	240.00
Feterita for grain.....bu.	55	990	1,287.00	10	150	244.50
for stover*.....tons		220	880.00		30	150.00
for hay.....tons	2	6	36.00	24	84	588.00
Sudan grass.....tons	10	30	240.00	88	176	1,760.00
Jerusalem corn.....tons	2	6	42.00			
Alfalfa.....tons	3,142	9,740	185,060.00	4,250	11,688	268,824.00
Timothy.....tons	15,587			14,813		
Clover.....tons	8,161			6,772		
Blue grass.....tons	17,023			16,401		
Sweet clover.....tons	20	† 22,014	374,238.00	51	† 19,476	428,472.00
Orchard grass.....tons				762		
Other tame grasses.....tons	10,327			17,834		
Prairie hay.....tons	7,490	7,490	119,840.00	7,618	5,714	102,852.00
Totals.....	192,675		\$4,991,102.96	207,457		\$5,345,172.22

Corn on hand March 1, 1917, 83,361 bushels; March 1, 1918, 279,677 bushels.

Wheat on hand March 1, 1917, 10,932 bushels; March 1, 1918, 22,015 bushels.

Prairie grass for pasture March 1, 1918: Acres fenced, 31,849.

* Forage after harvesting grain. † Product of 1916. ‡ Product of 1917.

SUMMARY.—JOHNSON COUNTY.,

Showing quantity and value of farm products in the county for 1917 and 1918.

Products.	1917.		1918.	
	Quantity.	Value.	Quantity.	Value.
Field crops.....acres	192,675	\$4,991,102.96	207,457	\$5,345,172.22
Animals slaughtered or sold for slaughter.....		701,663.00		1,108,085.00
Poultry and eggs sold.....		154,874.00		143,813.00
Wool clip.....lbs.	5,987	1,676.36	5,486	2,962.44
Cheese.....lbs.	270	45.90		
Butter.....lbs.	243,398	73,511.25	202,477	79,556.07
Condensed milk.....lbs.				
Milk sold.....		335,342.00		360,434.00
Honey and beeswax.....lbs.	29,286	5,315.48	2,982	745.50
Wood marketed.....		1,990.00		2,803.00
Totals.....		\$6,265,520.95		\$7,043,571.23

Number of cream separators March 1, 1917, 560; March 1, 1918, 665.

Number of silos March 1, 1917, 93; March 1, 1918, 118.

Number of tractors March 1, 1917, 53; March 1, 1918, 55.

KEARNY COUNTY.

Organized in 1888; area, 555,963 acres; population, 2,593; rank in population, 96; assessed valuation, \$7,459,404; miles of railroad, main track, 26.42; county seat, Lakin; population, 530.

POPULATION AND VALUATION.—KEARNY COUNTY.

Table showing total population, by townships and cities, for 1917 and 1918, and the assessed valuation of the municipal townships and cities of 1918.

Townships (and cities).	Population.		Assessed valuation of property, 1918.				
	1917.	1918.	Land.	City lots.	Personal.	Railroad, etc.	Total.
The county.....	2,594	2,593	\$4,012,610	\$253,360	\$1,735,325	\$1,458,109	\$7,459,404
Deerfield.....	264	220	.....	\$86,410	\$120,425	\$57,332	\$264,167
Deerfield tp.....	264	331	\$652,885	.....	204,020	290,903	1,147,808
Hartland tp.....	295	295	542,111	4,495	200,890	355,086	1,102,582
East Hibbard tp..	187	186	574,883	.....	81,920	.....	656,803
West Hibbard tp..	143	184	563,170	.....	184,250	.....	747,420
Kendall tp.....	243	263	598,351	.....	187,105	351,220	1,136,676
Lakin.....	509	530	.....	162,455	260,415	82,361	505,231
Lakin tp.....	520	191	411,511	.....	179,125	320,235	910,871
South side tp.....	433	393	669,699	.....	317,175	972	987,846

* Organized in 1918.

LIVESTOCK.—KEARNY COUNTY.

Table showing number, value and mortality of livestock in the county for 1917 and 1918.

Livestock.	1917.		1918.		Mortality.	
	Number.	Value.	Number.	Value.	1917.	1918.
Horses.....	3,637	\$436,440.00	4,053	\$449,883.00	14	14
Mules and asses.....	836	112,860.00	619	86,660.00	2	2
Milk cows.....	1,275	95,625.00	1,748	143,336.00	25	6
Other cattle.....	14,730	736,500.00	16,913	913,302.00	234	249
Sheep.....	266	2,926.00	62	775.00	.....	.....
Swine.....	1,824	37,392.00	2,089	47,002.50	11	54
Totals.....	22,568	\$1,421,743.00	25,484	\$1,640,958.50	286	325

Number of dogs in county March 1, 1917, 187; March 1, 1918, 290.

Mortality of swine from cholera, year ending March 1, 1917, 9.

FARM AND CROP STATISTICS.—KEARNY COUNTY.

Table showing acres, product and value of field crops in the county for 1917 and 1918.

Crops.	1917.			1918.		
	Acres.	Product.	Value.	Acres.	Product.	Value.
Winter wheat.....bu.	1,161	10,449	\$22,151.88	378	4,914	\$9,582.30
Spring wheat.....bu.	105	525	1,081.50	399	2,793	5,390.49
Corn.....bu.	2,574	15,444	21,312.72	3,182	44,548	66,822.00
Oats.....bu.	1,035			892	20,516	15,387.00
Rye.....bu.	41	205	358.75	52	364	600.60
Barley.....bu.	2,570	7,710	7,941.30	2,594	51,880	49,286.00
Emmer ("speltz").....bu.						
Irish potatoes.....bu.	2	100	165.00	8	360	540.00
Sweet potatoes.....bu.						
Cowpeas.....tons						
Flax.....bu.						
Broom corn.....lbs.	7,547	2,264,100	305,653.50	6,645	2,159,625	205,164.38
Millet.....tons	40	40	400.00	12	12	132.00
Sugar beets.....tons	1,419	15,609	93,654.00	1,317	10,536	105,360.00
Sorghum for syrup.....gals.	1			92	1,380	1,518.00
for seed.....bu.	139	973	1,459.50	1,688	20,256	35,448.00
for hay.....tons	4,191	5,239	52,390.00	4,203	6,305	63,050.00
Milo for grain.....bu.	7,041	56,328	78,859.20	8,224	139,808	209,712.00
for stover*.....tons		7,041	35,205.00		8,224	41,120.00
for hay.....tons	25	37	222.00	43	54	351.00
Kafir for grain.....bu.	3,637	40,007	60,010.50	3,512	52,680	79,020.00
for stover*.....tons		3,637	18,185.00		6,146	30,730.00
for hay.....tons	80	100	1,000.00	35	88	792.00
Feterita for grain.....bu.	1,705	18,755	26,257.00	942	13,188	19,782.00
for stover*.....tons		1,705	8,525.00		1,413	9,184.50
for hay.....tons	20	40	200.00	146	292	2,336.00
Sudan grass.....tons	240	600	4,800.00	318	795	9,540.00
Jerusalem corn.....tons	85	106	1,060.00	66	165	1,485.00
Alfalfa.....tons	8,488	23,766	404,022.00	8,362	20,905	418,100.00
Timothy.....tons						
Clover.....tons						
Blue grass.....tons						
Sweet clover.....tons	66	†			†	
Orchard grass.....tons						
Other tame grasses.....tons						
Prairie hay.....tons	1,945	1,945	25,285.00	2,260	2,260	33,900.00
Totals.....	44,157		\$1,170,198.85	45,370		\$1,414,333.27

Corn on hand March 1, 1917, 755 bushels; March 1, 1918, 1,014 bushels.

Wheat on hand March 1, 1918, 564 bushels.

Prairie grass for pasture March 1, 1918: Acres fenced, 47,713; acres not fenced, 5,005.

* Forage after harvesting grain. † Product of 1916. ‡ Product of 1917.

SUMMARY.—KEARNY COUNTY.

Showing quantity and value of farm products in the county for 1917 and 1918.

Products.	1917.		1918.	
	Quantity.	Value.	Quantity.	Value.
Field crops.....acres	44,157	\$1,170,198.85	45,370	1,414,333.27
Animals slaughtered or sold for slaughter.....		126,811.00		158,108.00
Poultry and eggs sold.....		11,954.00		13,142.00
Wool clip.....lbs.	125	35.00	50	27.00
Cheese.....lbs.				
Butter.....lbs.	28,475	8,542.50	22,182	8,650.98
Condensed milk.....lbs.				
Milk sold.....		30,307.00		37,719.00
Honey and beeswax.....lbs.	4,490	818.20	6,112	1,541.85
Wood marketed.....				
Totals.....		\$1,348,666.55		\$1,633,522.10

Number of cream separators March 1, 1917, 135; March 1, 1918, 200.

Number of silos March 1, 1917, 24; March 1, 1918, 35.

Number of tractors March 1, 1917, 3; March 1, 1918, 4.

KINGMAN COUNTY.

Organized in 1873; area, 551,952 acres; population, 11,300; rank in population, 60; assessed valuation, \$33,910,427; miles of railroad, main track, 146.65; county seat, Kingman; population, 1,832.

POPULATION AND VALUATION.—KINGMAN COUNTY.

Table showing total population, by townships and cities, for 1917 and 1918, and the assessed valuation of the municipal townships and cities of 1918.

Townships (and cities).	Population.		Assessed valuation of property, 1918.				
	1917.	1918.	Land.	City lots.	Personal.	Railroad, etc.	Total.
The county.....	12,169	11,300	\$18,847,281	\$1,899,741	\$8,148,430	\$5,014,975	\$33,910,427
Allen tp.....	243	232	\$797,152	.....	\$224,055	\$47,478	\$1,068,685
Belmont tp.....	306	310	908,853	\$1,325	208,419	1,280	1,119,877
Norwich.....	417	683	.....	99,035	211,716	41,174	351,925
Bennett tp.....	266	647	813,468	.....	175,979	439,937	1,429,384
Canton tp.....	322	336	608,594	2,080	233,793	231,536	1,076,003
Spivey.....	200	408	.....	59,298	100,915	56,044	216,257
Chicaskia tp.....	208	362	617,848	.....	195,642	195,240	1,008,730
Dale tp.....	454	421	693,460	22,445	243,537	225,909	1,185,351
Dresden tp.....	358	458	692,268	.....	140,720	39,487	872,475
Eagle tp.....	472	431	707,021	28,730	212,030	183,426	1,131,207
Eureka tp.....	434	464	797,669	43,185	330,748	157,729	1,329,331
Evan tp.....	400	414	954,935	.....	231,071	1,325	1,187,331
Galesburg tp.....	404	421	893,105	2,202	265,855	2,284	1,163,446
Hoosier tp.....	459	437	944,140	.....	268,694	174,401	1,387,235
Kingman tp.....	384	406	766,162	.....	222,604	2,875	991,641
Nashville.....	234	.....	.....	50,125	228,880	28,477	307,482
Liberty tp.....	291	489	615,214	.....	224,032	216,043	1,055,289
Kingman.....	2,384	1,832	.....	1,375,463	1,203,426	182,443	2,761,332
Ninnescah tp.....	463	432	1,200,904	.....	386,552	643,675	2,231,131
Peters tp.....	366	342	745,375	.....	293,915	2,521	1,041,811
Richland tp.....	428	419	922,028	10,901	295,906	346,078	1,574,913
Zenda.....	200	.....	.....	58,454	133,019	26,323	217,796
Rochester tp.....	229	429	705,279	.....	324,658	212,843	1,242,780
Rural tp.....	377	516	940,651	.....	285,962	156,475	1,383,088
Union tp.....	339	310	779,820	5,041	449,728	219,573	1,454,162
Valley tp.....	401	352	679,368	11,953	198,659	470,273	1,360,253
Vinita tp.....	345	322	1,052,821	.....	297,865	216,796	1,567,482
White tp.....	485	518	1,011,146	11,200	340,668	454,937	1,817,951
Cunningham†.....	300	.....	.....	118,304	219,382	38,393	376,079

* Not reported separately from township in 1918.

† In Dresden and Rural townships.

LIVESTOCK.—KINGMAN COUNTY.

Table showing number, value and mortality of livestock in the county for 1917 and 1918.

Livestock.	1917.		1918.		Mortality.	
	Number.	Value.	Number.	Value.	1917.	1918.
Horses.....	11,919	\$1,430,280.00	11,249	\$1,248,639.00	209	377
Mules and asses.....	4,548	613,980.00	4,085	571,900.00	31	47
Milk cows.....	6,012	450,900.00	7,795	639,190.00	76	267
Other cattle.....	33,882	1,694,100.00	35,031	1,891,674.00	473	1,208
Sheep.....	505	5,555.00	1,087	13,587.50	54	124
Swine.....	10,122	207,501.00	10,572	237,870.00	118	302
Totals.....	66,988	\$4,402,316.00	69,819	\$4,602,860.50	961	2,325

Number of dogs in county March 1, 1917, 1,182; March 1, 1918, 1,311.

Number of sheep killed by dogs, year ending March 1, 1917, 2.

Number of sheep killed by wolves, year ending March 1, 1918, 2.

Mortality of swine from cholera, year ending March 1, 1917, 45; March 1, 1918, 5.

FARM AND CROP STATISTICS.—KINGMAN COUNTY.

Table showing acres, product and value of field crops in the county for 1917 and 1918.

Crops.	1917.			1918.		
	Acres.	Product.	Value.	Acres.	Product.	Value.
Winter wheat.....bu.	149,791	1,348,119	\$2,777,125.14	148,381	2,077,334	\$4,154,668.00
Spring wheat.....bu.						
Corn.....bu.	89,713	448,565	529,306.70	62,916	377,496	543,594.24
Oats.....bu.	18,478	332,604	232,822.80	25,539	536,319	402,239.25
Rye.....bu.	3,660	32,940	52,704.00	4,034	60,510	96,816.00
Barley.....bu.	230	3,450	3,450.00	1,046	26,150	27,457.50
Emmer ("speltz").....bu.				2	38	30.40
Irish potatoes.....bu.	289	8,670	13,005.00	432	9,936	15,897.60
Sweet potatoes.....bu.	7	546	955.50	5	125	250.00
Cowpeas.....tons	3	4	64.00	31	47	775.50
Flax.....bu.	8	48	129.60			
Broom corn.....lbs.	3	1,200	168.00			
Millet.....tons	697	1,394	14,637.00	775	775	9,300.00
Sugar beets.....tons						
Sorghum for syrup.....gals.	27	270	189.00	81	1,620	1,782.00
for seed.....bu.	1,289	11,601	19,721.70	4,293	42,930	85,860.00
for hay.....tons	8,217	20,543	123,258.00	9,492	18,984	142,380.00
Milo for grain.....bu.	254	3,048	4,267.20	3,856	57,840	89,652.00
for stover*.....tons		508	2,032.00		8,676	52,056.00
for hay.....tons	30	60	360.00	189	473	3,547.50
Kafir for grain.....bu.	19,269	192,690	269,766.00	25,141	326,833	522,932.80
for stover*.....tons		24,086	96,344.00		50,282	251,410.00
for hay.....tons	2,637	6,592	39,552.00	2,853	6,419	44,933.00
Feterita for grain.....bu.	1,128	16,920	21,996.00	2,810	39,340	59,010.00
for stover*.....tons		2,820	11,280.00		6,323	37,938.00
for hay.....tons	209	522	3,654.00	324	810	6,480.00
Sudan grass.....tons	290	653	5,224.00	1,187	2,374	23,740.00
Jerusalem corn.....tons	10	25	150.00	24	54	378.00
Alfalfa.....tons	6,553	17,038	306,684.00	7,489	18,723	374,460.00
Timothy.....tons	15					
Clover.....tons						
Blue grass.....tons				16		
Sweet clover.....tons	162	† 250	3,750.00	148	‡ 150	2,850.00
Orchard grass.....tons	3					
Other tame grasses.....tons	43			22		
Prairie hay.....tons	5,863	5,863	76,219.00	5,337	4,003	64,048.00
Totals.....	308,878		\$4,608,814.64	306,423		\$7,014,485.79

Corn on hand March 1, 1917, 50,330 bushels; March 1, 1918, 100,093 bushels.

Wheat on hand March 1, 1917, 47,976 bushels; March 1, 1918, 82,481 bushels.

Prairie grass for pasture March 1, 1918: Acres fenced, 180,000; acres not fenced, 3,165.

* Forage after harvesting grain. † Product of 1916. ‡ Product of 1917.

SUMMARY.—KINGMAN COUNTY.

Showing quantity and value of farm products in the county for 1917 and 1918.

Products.	1917.		1918.	
	Quantity.	Value.	Quantity.	Value.
Field crops.....acres	308,878	\$4,608,814.64	306,423	\$7,014,485.79
Animals slaughtered or sold for slaughter.....		765,265.00		776,432.00
Poultry and eggs sold.....		120,091.00		115,976.00
Wool clip.....lbs.	250	70.00	595	321.30
Cheese.....lbs.				
Butter.....lbs.	191,030	57,629.94	157,482	61,655.34
Condensed milk.....lbs.				
Milk sold.....		96,586.00		160,582.00
Honey and beeswax.....lbs.	330	59.40	107	26.75
Wood marketed.....		201.00		254.00
Totals.....		\$5,648,716.98		\$8,129,733.18

Number of cream separators March 1, 1917, 807; March 1, 1918, 931.

Number of silos March 1, 1917, 271; March 1, 1918, 270.

Number of tractors March 1, 1917, 83; March 1, 1918, 75.

KIOWA COUNTY.

Organized in 1886; area, 459,612 acres; population, 6,283; rank in population, 80; assessed valuation, \$17,502,748; miles of railroad, main track, 44.97; county seat, Greensburg; population, 1,155.

POPULATION AND VALUATION.—KIOWA COUNTY.

Table showing total population, by townships and cities, for 1917 and 1918, and the assessed valuation of the municipal townships and cities of 1918.

Townships (and cities).	Population.		Assessed valuation of property, 1918.				
	1917.	1918.	Land.	City lots.	Personal.	Railroad, etc.	Total.
The county	6,948	6,283	\$10,259,453	\$1,013,363	\$4,284,045	\$1,975,887	\$17,502,748
Brenham tp.	308	354	\$916,726		\$200,000	\$268,612	\$1,385,338
Butler tp.	239	245	538,232		198,035		736,267
Greensburg	1,484	1,155		\$596,848	747,520	69,786	1,414,154
Center tp.	231	212	682,161	240	209,845	206,267	1,098,513
Garfield tp.	230	240	732,283		184,985	269,241	1,186,509
Glick tp.	223	243	618,942	8,015	335,230	602,866	1,565,053
Highland tp.	281	267	751,625		190,310		941,935
Kiowa tp.	173	179	375,612		74,850		450,462
Lincoln tp.	257	284	452,844		217,060		669,904
Mullinville.	468	354		118,460	204,225	12,550	335,235
Martin tp.	323	350	1,006,114		209,170	263,225	1,478,509
Reeder tp.	301	335	696,512		223,115	1,603	921,230
Union tp.	219	229	450,917		115,695		566,612
Ursula tp.	415	403	910,707		234,265	894	1,145,866
Valley tp.	229	248	570,691		136,245		706,936
Haviland.	832	544		254,825	321,480	28,806	605,111
Wellsford	* 516	149	990	34,975	79,555		114,530
Wellsford tp.		297	980,117		247,715	252,037	1,479,869
Westland tp.	219	195	545,970		154,745		700,715

* Not reported separately from township in 1917.

LIVESTOCK.—KIOWA COUNTY.

Table showing number, value and mortality of livestock in the county for 1917 and 1918.

Livestock.	1917.		1918.		Mortality.	
	Number.	Value.	Number.	Value.	1917.	1918.
Horses.	6,822	\$818,640.00	7,187	\$797,757.00	137	356
Mules and asses.	3,004	405,540.00	2,543	356,020.00	25	23
Milk cows.	2,628	197,100.00	2,732	224,024.00	51	67
Other cattle.	18,744	937,200.00	14,213	767,502.00	268	450
Sheep.	5	55.00	14	175.00		1
Swine.	3,303	67,711.50	4,006	90,135.00	292	164
Totals.	34,506	\$2,426,246.50	30,695	\$2,235,613.00	773	1,061

Number of dogs in county March 1, 1917, 612; March 1, 1918, 589.

Mortality of swine from cholera, year ending March 1, 1917, 110; March 1, 1918, 11.

FARM AND CROP STATISTICS.—KIOWA COUNTY.

Table showing acres, product and value of field crops in the county for 1917 and 1918.

Crops.	1917.			1918.		
	Acres.	Product.	Value.	Acres.	Product.	Value.
Winter wheat.....bu.	55,590	277,950	\$542,002.50	123,010	1,107,090	\$2,180,967.30
Spring wheat.....bu.						
Corn.....bu.	118,412	592,060	710,472.00	57,256	286,280	412,243.20
Oats.....bu.	10,892	21,784	15,684.48	10,807	140,491	112,392.80
Rye.....bu.	1,648	9,888	17,304.00	4,400	35,200	57,376.00
Barley.....bu.	3,926	15,704	15,704.00	3,705	51,870	51,870.00
Emmer ("speltz").....bu.						
Irish potatoes.....bu.	60	1,200	1,920.00	90	1,080	1,738.80
Sweet potatoes.....bu.	1			1	23	51.75
Cowpeas.....tons						
Flax.....bu.	3	6	16.20			
Broom corn.....lbs.				3	900	90.00
Millet.....tons				69	69	828.00
Sugar beets.....tons						
Sorghum for syrup.....gals.						
for seed.....bu.	631	5,048	8,177.76	2,226	17,808	35,616.00
for hay.....tons	9,967	17,443	139,544.00	8,092	16,184	161,840.00
Milo for grain.....bu.	7,403	66,627	89,280.18	7,934	87,274	130,911.00
for stover*.....tons		7,403	33,313.50		7,934	59,505.00
for hay.....tons	87	174	1,218.00	81	142	1,420.00
Kafir for grain.....bu.	22,944	137,664	202,366.08	15,667	156,670	235,005.00
for stover*.....tons		34,416	206,496.00		27,417	164,502.00
for hay.....tons	2,459	7,377	59,016.00	922	1,844	17,518.00
Feterita for grain.....bu.	1,715	17,150	23,324.00	1,992	23,904	34,660.80
for stover*.....tons		2,573	12,865.00		3,486	17,430.00
for hay.....tons	152	228	1,596.00	264	462	3,696.00
Sudan grass.....tons	199	548	4,932.00	786	1,572	18,864.00
Jerusalem corn.....tons	6	18	144.00			
Alfalfa.....tons	652	1,630	29,340.00	1,015	2,030	42,630.00
Timothy.....tons						
Clover.....tons						
Blue grass.....tons						
Sweet clover.....tons	27	†		40	‡ 85	1,615.00
Orchard grass.....tons						
Other tame grasses.....tons	4					
Prairie hay.....tons	834	834	10,842.00	995	746	12,682.00
Totals.....	237,612		\$2,125,557.70	239,355		\$3,755,452.65

Corn on hand March 1, 1917, 80,865 bushels; March 1, 1918, 212,918 bushels.

Wheat on hand March 1, 1917, 130,447 bushels; March 1, 1918, 12,095 bushels.

Prairie grass for pasture March 1, 1918: Acres fenced, 155,161; acres not fenced, 8,179.

* Forage after harvesting grain. † Product of 1916. ‡ Product of 1917.

SUMMARY.—KIOWA COUNTY.

Showing quantity and value of farm products in the county for 1917 and 1918.

Products.	1917.		1918.	
	Quantity.	Value.	Quantity.	Value.
Field crops.....acres	237,612	\$2,125,557.70	239,355	\$3,755,452.65
Animals slaughtered or sold for slaughter.....		273,098.00		325,747.00
Poultry and eggs sold.....		53,258.00		47,974.00
Wool clip.....lbs.				
Cheese.....lbs.	100	17.00	300	54.00
Butter.....lbs.	104,705	31,411.50	112,306	43,799.34
Condensed milk.....lbs.				
Milk sold.....		24,924.00		32,747.00
Honey and beeswax.....lbs.				
Wood marketed.....				8.00
Totals.....		\$2,508,266.20		\$4,205,781.99

Number of cream separators March 1, 1917, 374; March 1, 1918, 427.

Number of silos March 1, 1917, 36; March 1, 1918, 45.

Number of tractors March 1, 1917, 41; March 1, 1918, 63.

LABETTE COUNTY.

Organized in 1867; area, 414,416 acres; population, 35,231; rank in population, 9; assessed valuation, \$42,212,064; miles of railroad, main track, 150.19; county seat, Oswego; population, 2,270.

POPULATION AND VALUATION.—LABETTE COUNTY.

Table showing total population, by townships and cities, for 1917 and 1918, and the assessed valuation of the municipal townships and cities of 1918.

Townships (and cities).	Population.		Assessed valuation of property, 1918.				
	1917.	1918.	Land.	City lots.	Personal.	Railroad, etc.	Total.
The county.....	34,999	35,231	\$14,126,350	\$10,463,345	\$8,930,800	\$8,691,569	\$42,212,064
Canada tp.....	556	560	\$878,181	\$11,920	\$327,305	\$358,770	\$1,576,176
Edna.....	462	528	175,925	290,480	21,269	487,674	
Elm Grove tp.....	799	861	1,022,161	1,075	356,355	185,304	1,564,895
Fairview tp.....	586	569	732,616		207,475	332,524	1,272,615
Bartlett.....	269	230		80,280	124,610	10,118	215,008
Hackberry tp.....	878	864	1,111,262		411,275	214,009	1,736,546
Howard tp.....	815	857	909,949	16,050	264,925	277,390	1,468,314
Labette tp.....	529	548	735,091		199,430	285,692	1,220,213
Liberty tp.....	846	924	804,886	28,045	299,470	430,121	1,562,522
Montana tp.....	579	589	550,811	11,335	230,365	147,704	940,215
Mound Valley.....	874	697		273,335	75,893	622,338	
Mound Valley tp..	961	591	1,434,819		638,540	754,496	2,827,855
Altamont.....	548	490		167,040	195,780	39,244	402,064
Mt. Pleasant tp..	558	929	766,053		184,630	297,298	1,247,981
Neosho tp.....	436	428	499,112		156,275	165,979	821,366
Parsons.....	16,929	17,286		8,233,275	2,579,580	2,205,689	13,018,544
North tp.....	825	768	1,011,815	9,650	289,085	453,009	1,763,559
Osage tp.....	1,260	1,204	1,293,785	29,360	497,825	621,580	2,442,550
Oswego.....	2,334	2,270		801,960	496,560	148,920	1,447,440
Oswego tp.....	366	492	547,309		166,100	497,280	1,210,689
Chetopa.....	1,855	1,645		490,485	273,450	75,564	839,499
Richland tp.....	911	945	874,311		217,790	537,842	1,629,943
Walton tp.....	823	956	954,189	133,835	250,160	555,874	1,894,058

LIVESTOCK.—LABETTE COUNTY.

Table showing number, value and mortality of livestock in the county for 1917 and 1918.

Livestock.	1917.		1918.		Mortality.	
	Number.	Value.	Number.	Value.	1917.	1918.
Horses.....	11,898	\$1,427,760.00	11,969	\$1,328,559.00	302	238
Mules and asses.....	3,371	455,085.00	2,822	395,080.00	37	41
Milk cows.....	10,288	771,600.00	11,385	933,570.00	212	219
Other cattle.....	17,226	861,300.00	19,130	1,033,020.00	463	648
Sheep.....	5,030	55,330.00	6,797	84,962.50	125	109
Swine.....	14,547	298,213.50	16,272	366,120.00	581	304
Totals.....	62,360	\$3,869,288.50	68,375	\$4,141,311.50	1,720	1,559

Number of dogs in county March 1, 1917, 1,671; March 1, 1918, 2,285.

Number of sheep killed by dogs, year ending March 1, 1917, 46; March 1, 1918, 35.

Number of sheep killed by wolves, year ending March 1, 1917, 27; March 1, 1918, 103.

Mortality of swine from cholera, year ending March 1, 1917, 277; March 1, 1918, 169.

FARM AND CROP STATISTICS.—LABETTE COUNTY.

Table showing acres, product and value of field crops in the county for 1917 and 1918.

Crops.	1917.			1918.		
	Acres.	Product.	Value.	Acres.	Product.	Value.
Winter wheat.....bu.	49,580	694,120	\$1,409,063.60	76,340	1,374,120	\$2,775,722.40
Spring wheat.....bu.				38	608	1,216.00
Corn.....bu.	59,583	893,745	1,063,556.55	40,873	367,857	562,821.21
Oats.....bu.	62,134	2,361,092	1,322,211.52	67,731	1,964,199	1,335,655.32
Rye.....bu.	196	2,352	4,045.44	216	3,240	5,216.40
Barley.....bu.	29	522	532.44	16	320	336.00
Emmer ("speltz").....bu.						
Irish potatoes.....bu.	267	22,962	32,606.04	389	8,947	13,420.50
Sweet potatoes.....bu.	50	5,000	7,050.00	45	3,600	6,568.00
Cowpeas.....tons	459	574	9,184.00	350	525	8,662.50
Flax.....bu.	311	2,488	6,717.60	118	590	1,917.50
Broom corn.....lbs.	419	199,025	27,863.50	300	90,000	9,000.00
Millet.....tons	308	616	6,776.00	106	159	1,749.00
Sugar beets.....tons	1	10	55.00			
Sorghum for syrup.....gals.	105	7,350	5,145.00	186	9,300	10,230.00
for seed.....bu.	165	1,980	2,970.00	341	4,092	7,774.80
for hay.....tons	2,383	7,149	57,192.00	2,270	5,108	51,080.00
Milo for grain.....bu.	155	2,325	2,790.00	158	1,264	1,896.00
for stover*.....tons		387	1,935.00		316	1,580.00
for hay.....tons	3	8	52.00	20	40	260.00
Kafir for grain.....bu.	10,869	173,904	236,509.44	10,439	62,634	93,951.00
for stover*.....tons		32,607	163,035.00		26,098	156,588.00
for hay.....tons	138	448	3,360.00	173	433	2,814.50
Peterita for grain.....bu.	591	10,638	15,957.00	279	2,790	4,185.00
for stover*.....tons		1,773	8,865.00		419	2,095.00
for hay.....tons	273	1,092	7,098.00	87	196	1,372.00
Sudan grass.....tons	605	1,815	18,150.00	705	1,410	15,510.00
Jerusalem corn.....tons				53	133	864.50
Alfalfa.....tons	3,599	12,597	226,746.00	4,775	13,131	302,013.00
Timothy.....tons	4,257			3,373		
Clover.....tons	966			1,023		
Blue grass.....tons	1,669	† 7,077	113,232.00	2,288	‡ 3,855	84,810.00
Sweet clover.....tons	399			157		
Orchard grass.....tons	47			15		
Other tame grasses.....tons	1,096			851		
Prairie hay.....tons	22,831	22,831	319,634.00	20,870	15,653	297,407.00
Totals.....	223,488		\$5,072,332.13	234,585		\$5,756,735.63

Corn on hand March 1, 1917, 29,992 bushels; March 1, 1918, 136,124 bushels.

Wheat on hand March 1, 1917, 4,104 bushels; March 1, 1918, 20,290 bushels.

Prairie grass for pasture March 1, 1918: Acres fenced, 77,660; acres not fenced, 343.

* Forage after harvesting grain. † Product of 1916. ‡ Product of 1917.

SUMMARY.—LABETTE COUNTY.

Showing quantity and value of farm products in the county for 1917 and 1918.

Products.	1917.		1918.	
	Quantity.	Value.	Quantity.	Value.
Field crops.....acres	223,488	\$5,072,332.13	234,585	\$5,756,735.63
Animals slaughtered or sold for slaughter.....		624,515.00		784,643.00
Poultry and eggs sold.....		189,829.00		199,785.00
Wool clip.....lbs.	8,491	2,377.48	9,305	5,024.70
Cheese.....lbs.	115	19.55		
Butter.....lbs.	2,406,720	785,711.73	2,380,804	992,708.13
Condensed milk.....lbs.				
Milk sold.....		204,182.00		257,614.00
Honey and beeswax.....lbs.	16,497	3,032.26	2,319	579.75
Wood marketed.....		1,907.00		1,633.00
Total.....		\$6,883,906.15		\$7,998,723.21

Number of cream separators March 1, 1917, 1,487; March 1, 1918, 1,478.

Number of silos March 1, 1917, 207; March 1, 1918, 179.

Number of tractors March 1, 1917, 52; March 1, 1918, 64.

LANE COUNTY.

Organized in 1886; area, 459,359 acres; population, 2,488; rank in population, 99; assessed valuation, \$8,262,145; miles of railroad, main track, 48.92; county seat, Dighton; population, 364.

POPULATION AND VALUATION.—LANE COUNTY.

Table showing total population, by townships and cities, for 1917 and 1918, and the assessed valuation of the municipal townships and cities of 1918.

Townships (and cities).	Population.		Assessed valuation of property, 1918.				
	1917.	1918.	Land.	City lots.	Personal.	Railroad, etc.	Total.
The county.....	2,676	2,488	\$4,130,430	\$252,453	\$2,089,540	\$1,789,722	\$8,262,145
Alamota tp.....	253	230	\$413,150	\$72	\$235,040	\$270,067	\$918,329
Blaine tp.....	263	245	546,190	404	231,715	256,380	1,034,689
Cheyenne tp.....	365	349	418,985	31,703	298,200	336,682	1,085,570
Cleveland tp.....	132	124	448,290	.....	119,430	.....	567,720
Dighton.....	423 } 705	364 } 631	.....	207,702	387,963	42,445	638,110
Dighton tp.....	282 }	267 }	557,265	1,310	209,145	232,914	1,000,634
Spring Creek tp...	236	255	457,560	.....	153,080	.....	610,640
Sutton tp.....	133	142	417,625	.....	113,500	.....	531,125
White Rock tp....	263	239	445,920	1,350	152,327	327,057	926,654
Wilson tp.....	326	273	425,445	9,912	189,140	324,177	948,674

LIVESTOCK.—LANE COUNTY.

Table showing number, value and mortality of livestock in the county for 1917 and 1918.

Livestock.	1917.		1918.		Mortality.	
	Number.	Value.	Number.	Value.	1917.	1918.
Horses.....	5,847	\$701,640.00	5,310	\$589,410.00	52	57
Mules and asses.....	1,668	225,180.00	1,196	167,440.00	12	9
Milk cows.....	1,168	87,600.00	1,940	159,080.00	9	10
Other cattle.....	11,908	595,400.00	10,640	574,560.00	118	198
Sheep.....	85	935.00	100	1,250.00	.....	.....
Swine.....	2,623	53,771.50	1,648	37,080.00	33	44
Totals.....	23,299	\$1,664,526.50	20,834	\$1,528,820.00	224	318

Number of dogs in county March 1, 1917, 311; March 1, 1918, 349.

Mortality of swine from cholera, year ending March 1, 1917, 5; March 1, 1918, 21.

FARM AND CROP STATISTICS.—LANE COUNTY.

Table showing acres, product and value of field crops in the county for 1917 and 1918.

Crops.	1917.			1918.		
	Acres.	Product.	Value.	Acres.	Product.	Value.
Winter wheat.....bu.	4,331	17,324	\$36,726.88	8,448	16,896	\$33,116.16
Spring wheat.....bu.	151			40	80	155.20
Corn.....bu.	41,310	41,310	51,637.50	25,155	176,085	264,127.50
Oats br.....bu.	6,980			14,452	28,904	21,388.96
Rye.....bu.	257			425	850	1,402.50
Barley.....bu.	24,795			13,940	83,640	83,640.00
Emmer ("speltz").....bu.						
Irish potatoes.....bu.	85	1,275	2,103.75	130	2,990	4,724.20
Sweet potatoes.....bu.						
Cowpeas.....tons						
Flax.....bu.						
Broom corn.....lbs.	25	6,250	875.00			
Millet.....tons	2,506	1,253	12,530.00	3,540	3,540	42,480.00
Sugar beets.....tons						
Sorghum for syrup.....gals.						
for seed.....bu.	4,271	25,626	47,126.80	21,267	148,869	275,407.65
for hay.....tons	19,396	19,396	193,960.00	19,750	24,688	271,568.00
Milo for grain.....bu.	13,767	68,835	111,512.70	12,034	72,204	111,916.20
for stover*.....tons		13,767	68,835.00		12,034	60,170.00
for hay.....tons				405	506	4,048.00
Kafir for grain.....bu.	7,968			5,533	27,665	42,880.75
for stover*.....tons		7,968	55,776.00		5,533	41,497.50
for hay.....tons	10	10	90.00	20	25	237.50
Feterita for grain.....bu.	3,331	6,662	9,993.00	3,684	25,788	38,682.00
for stover*.....tons					4,605	29,932.50
for hay.....tons	245			802	1,604	12,832.00
Sudan grass.....tons	137	343	3,430.00	592	888	9,768.00
Jerusalem corn.....tons	10	10	90.00			
Alfalfa.....tons	1,587	3,333	66,660.00	1,232	2,464	49,280.00
Timothy.....tons						
Clover.....tons						
Blue grass.....tons						
Sweet clover.....tons	8	†			‡	
Orchard grass.....tons						
Other tame grasses.....tons						
Prairie hay.....tons	310	232	3,016.00	430	430	6,450.00
Totals.....	131,480		\$664,362.63	131,879		\$1,405,704.62

Corn on hand March 1, 1917, 13,438 bushels; March 1, 1918, 2,305 bushels.

Wheat on hand March 1, 1917, 44,970 bushels; March 1, 1918, 4,215 bushels.

Prairie grass for pasture March 1, 1918: Acres fenced, 188,156; acres not fenced, 15,215.

* Forage after harvesting grain. † Product of 1916. ‡ Product of 1917.

SUMMARY.—LANE COUNTY.

Showing quantity and value of farm products in the county for 1917 and 1918.

Products.	1917.		1918.	
	Quantity.	Value.	Quantity.	Value.
Field crops.....acres	131,480	\$664,362.63	131,879	\$1,405,704.62
Animals slaughtered or sold for slaughter.....		103,626.00		103,539.00
Poultry and eggs sold.....		36,613.00		34,211.00
Wool clip.....lbs.	361	101.08		
Cheese.....lbs.				
Butter.....lbs.	32,028	9,608.40	35,557	13,867.23
Condensed milk.....lbs.				
Milk sold.....lbs.		24,711.00		42,377.00
Honey and beeswax.....lbs.				
Wood marketed.....				
Totals.....		\$839,022.11		\$1,599,698.85

Number of cream separators March 1, 1917, 193; March 1, 1918, 261.

Number of silos March 1, 1917, 7; March 1, 1918, 11.

Number of tractors March 1, 1917, 22; March 1, 1918, 20.

LEAVENWORTH COUNTY.

Organized in 1855; area, 291,492 acres; population, 41,130; rank in population, 8; assessed valuation, \$45,607,724; miles of railroad, main track, 162.194; county seat, Leavenworth; population, 21,849.

POPULATION AND VALUATION.—LEAVENWORTH COUNTY.

Table showing total population, by townships and cities, for 1917 and 1918, and the assessed valuation of the municipal townships and cities of 1918.

Townships (and cities).	Population.		Assessed valuation of property, 1918.				
	1917.*	1918.	Land.	City lots.	Personal.	Railroad, etc.	Total.
The county.....	40,830	41,130	\$18,849,506	\$9,517,920	\$9,157,600	\$8,082,698	\$45,607,724
Alexandria tp.....	839	839	\$1,644,564	.....	\$305,680	\$13,097	\$1,963,341
Lansing.....	870	870	2,009,004	.....	338,980	1,329,612	3,677,596
Delaware tp.....	6,620	6,620	.....	.....	.....	.....	.....
Easton.....	220	220	.....	\$81,770	68,750	8,741	159,261
Easton tp.....	1,085	1,085	1,787,666	.....	266,890	338,159	2,392,715
Basehor.....	207	207	.....	.....	.....	.....	.....
Fairmount.....	79	79	2,126,193	.....	449,680	670,528	3,246,401
Fairmount tp.....	659	659	.....	.....	.....	.....	.....
High Prairie tp...	1,015	1,015	1,923,026	.....	283,740	161,656	2,368,422
Kickapoo tp.....	1,925	2,425	2,171,340	.....	295,180	1,367,468	3,833,988
Reno tp.....	688	688	1,852,632	.....	160,150	1,020,251	3,033,033
Lenape.....	76	76	.....	.....	.....	.....	.....
Linwood.....	386	386	.....	93,900	93,140	69,957	256,997
Sherman tp.....	1,031	1,031	1,692,263	.....	268,320	1,042,954	3,003,537
Stranger tp.....	895	895	1,909,522	.....	337,310	400,612	2,647,444
Tonganoxie.....	953	953	.....	455,210	383,260	56,960	895,430
Tonganoxie tp...	1,233	1,233	1,733,296	.....	473,790	251,139	2,458,225
Leavenworth:							
First ward.....	2,807	†....	.....	.....	.....	.....	.....
Second ward.....	4,054	.....	.....	.....	.....	.....	.....
Third ward.....	3,193	.....	.....	.....	.....	.....	.....
Fourth ward.....	2,549	.....	.....	8,877,040	5,432,730	1,351,564	15,671,334
Fifth ward.....	3,285	.....	.....	.....	.....	.....	.....
Sixth ward.....	6,161	.....	.....	.....	.....	.....	.....

* 1916 figures.

† 1918 figures not available by wards.

LIVESTOCK.—LEAVENWORTH COUNTY.

Table showing number, value and mortality of livestock in the county for 1917 and 1918.

Livestock.	1917.		1918.		Mortality.	
	Number.	Value.	Number.	Value.	1917.	1918.
Horses.....	7,305	\$876,600.00	7,341	\$814,851.00	151	181
Mules and asses.....	2,548	343,980.00	2,482	347,480.00	20	23
Milk cows.....	7,668	575,100.00	8,878	727,996.00	124	184
Other cattle.....	13,365	668,250.00	11,933	644,382.00	291	338
Sheep.....	1,371	15,081.00	6,529	81,612.50	99	74
Swine.....	15,000	307,500.00	18,606	418,635.00	595	2,150
Totals.....	47,257	\$2,786,511.00	55,769	\$3,034,956.50	1,280	2,950

Number of dogs in county March 1, 1917, 2,070; March 1, 1918, 2,529.

Number of sheep killed by dogs, year ending March 1, 1917, 13; March 1, 1918, 3.

Number of sheep killed by wolves, year ending March 1, 1918, 2.

Mortality of swine from cholera, year ending March 1, 1917, 400; March 1, 1918, 1,772.

FARM AND CROP STATISTICS.—LEAVENWORTH COUNTY.

Table showing acres, product and value of field crops in the county for 1917 and 1918.

Crops.	1917.			1918.		
	Acres.	Product.	Value.	Acres.	Product.	Value.
Winter wheat.....bu.	40,744	733,392	\$1,547,457.12	59,443	1,307,746	\$2,693,956.76
Spring wheat.....bu.				443	9,746	19,784.38
Corn.....bu.	46,328	1,065,544	1,204,064.72	34,604	692,080	982,753.60
Oats.....bu.	20,972	838,880	503,328.00	18,956	625,548	419,117.16
Rye.....bu.	342	5,814	9,941.94	478	9,082	14,985.30
Barley.....bu.	14	350	367.50	33	825	825.00
Emmer ("speltz").....bu.	3	120	78.00	4	120	86.40
Irish potatoes.....bu.	1,641	137,844	179,197.20	2,000	180,000	228,600.00
Sweet potatoes.....bu.	3	306	324.36	13	1,170	1,755.00
Cowpeas.....tons	20	25	400.00	10	15	247.50
Flax.....bu.	50	350	945.00			
Broom corn.....lbs.						
Millet.....tons	293	366	3,660.00	196	392	4,312.00
Sugar beets.....tons				1	6	57.00
Sorghum for syrup.....gals.	300	21,000	14,700.00	324	22,680	24,948.00
for seed.....bu.	25	250	375.00	23	345	638.25
for hay.....tons	476	1,428	11,424.00	407	1,425	9,262.50
Milo for grain.....bu.	101	909	1,272.60	22	352	545.60
for stover*.....tons		353	1,412.00		66	396.00
for hay.....tons						
Kafir for grain.....bu.	589	10,602	16,963.20	299	7,477	11,960.00
for stover*.....tons		1,767	7,068.00		897	6,279.00
for hay.....tons	109	463	2,315.00	113	339	3,051.00
Feterita for grain.....bu.	44	792	1,029.60	31	465	744.00
for stover*.....tons		176	704.00		93	511.50
for hay.....tons	27	95	570.00	7	25	187.50
Sudan grass.....tons	93	279	2,232.00	71	178	1,780.00
Jerusalem corn.....tons				17	51	459.00
Alfalfa.....tons	6,613	19,839	436,458.00	7,631	20,985	503,640.00
Timothy.....tons	7,779			7,865		
Clover.....tons	8,516			10,240		
Blue grass.....tons	33,270	† 23,438	410,165.00	40,521	‡ 18,722	411,884.00
Sweet clover.....tons	79			145		
Orchard grass.....tons	3			38		
Other tame grasses.....tons	9,157			2,645		
Prairie hay.....tons	7,088	7,088	120,496.00	4,497	3,373	67,460.00
Totals.....	184,679		\$4,476,948.24	191,077		\$5,410,226.45

Corn on hand March 1 1917, 29,517 bushels; March 1, 1918, 96,302 bushels.

Wheat on hand March 1, 1917, 2,820 bushels; March 1, 1918, 6,215 bushels.

Prairie grass for pasture March 1, 1918: Acres fenced, 19,178; acres not fenced, 234.

* Forage after harvesting grain. † Product of 1916. ‡ Product of 1917.

SUMMARY.—LEAVENWORTH COUNTY.

Showing quantity and value of farm products in the county for 1917 and 1918.

Products.	1917.		1918.	
	Quantity.	Value.	Quantity.	Value.
Field crops.....acres	184,679	\$4,476,948.24	191,077	\$5,410,226.45
Animals slaughtered or sold for slaughter.....		581,924.00		905,153.00
Poultry and eggs sold.....		132,569.00		133,588.00
Wool clip.....lbs.	2,725	763.00	2,361	1,274.94
Cheese.....lbs.	3,006	511.02		
Butter.....lbs.	191,285	58,495.50	353,378	143,817.42
Condensed milk.....lbs.	1,150,330	69,019.80	1,036,731	93,098.44
Milk sold.....		231,085.00		336,803.00
Honey and beeswax.....lbs.	23,998	4,405.84	3,905	1,001.25
Wood marketed.....		5,477.00		5,699.00
Totals.....		\$5,561,198.40		\$7,030,661.50

Number of cream separators March 1, 1917, 499; March 1, 1918, 579.

Number of silos March 1, 1917, 213; March 1, 1918, 214.

Number of tractors March 1, 1917, 24; March 1, 1918, 44.

LINCOLN COUNTY.

Organized in 1870; area, 460,203 acres; population, 10,030; rank in population, 68; assessed valuation, \$26,653,126; miles of railroad, main track, 74.28; county seat, Lincoln; population, 1,693.

POPULATION AND VALUATION.—LINCOLN COUNTY.

Table showing total population, by townships and cities, for 1917 and 1918, and the assessed valuation of the municipal townships and cities of 1918.

Townships (and cities).	Population.		Assessed valuation of property, 1918.				
	1917.	1918.	Land.	City lots.	Personal.	Railroad, etc.	Total.
The county	10,761	10,030	\$16,222,311	\$1,684,975	\$7,078,480	\$1,667,360	\$26,653,126
Battle Creek tp.	318	298	\$725,802	.....	\$173,400	\$1,738	\$900,940
Beaver tp.	310	304	611,527	.....	125,280	107	736,914
Cedron tp.	443	423	737,658	.....	251,090	15,898	1,004,646
Beverly	369	336	.....	\$126,485	237,785	23,951	388,221
Colorado tp.	442	482	1,114,270	7,795	367,600	186,242	1,675,907
Elkhorn tp.	494	490	1,229,430	885	346,565	236,246	1,813,126
Franklin tp.	420	406	717,485	.....	276,815	1,819	996,119
Golden Belt tp.	299	281	663,322	.....	158,680	1,013	823,015
Grant tp.	446	410	785,553	11,570	357,050	53,919	1,208,092
Hanover tp.	351	322	675,866	.....	181,400	2,251	859,517
Highland tp.	294	296	601,511	.....	175,395	1,384	778,290
Indiana tp.	427	403	997,854	4,375	316,890	204,066	1,523,185
Logan tp.	289	303	655,303	.....	227,945	583	883,831
Madison tp.	389	388	658,292	11,445	209,305	66,214	945,256
Marion tp.	405	350	826,783	.....	266,345	50,769	1,143,897
Orange tp.	393	389	942,828	22,780	233,105	43,279	1,241,992
Sylvan Grove	565	365	.....	343,785	538,815	37,199	919,799
Pleasant tp.	413	382	1,013,972	.....	302,530	184,897	1,501,399
Salt Creek tp.	409	346	841,512	1,655	196,460	261,361	1,300,988
Barnard	429	361	.....	219,230	408,800	42,012	670,042
Scott tp.	351	324	759,899	.....	206,515	1,285	967,699
Valley tp.	241	248	662,536	.....	311,880	1,680	976,096
Vesper tp.	442	430	1,000,908	33,560	216,480	206,174	1,457,122
Lincoln*	1,822	1,693	.....	901,410	992,350	43,273	1,937,033

* In Elkhorn, Beaver, Marion and Indiana townships.

LIVESTOCK.—LINCOLN COUNTY.

Table showing number, value and mortality of livestock in the county for 1917 and 1918.

Livestock.	1917.		1918.		Mortality.	
	Number.	Value.	Number.	Value.	1917.	1918.
Horses	10,242	\$1,229,040.00	10,300	\$1,143,300.00	118	147
Mules and asses	2,939	396,765.00	2,458	344,120.00	5	9
Milk cows	5,224	391,800.00	6,855	562,110.00	28	72
Other cattle	35,941	1,797,050.00	29,240	1,878,960.00	244	429
Sheep	1,319	14,509.00	1,695	21,187.50	51	47
Swine	10,092	206,886.00	8,107	182,407.50	192	993
Totals	65,757	\$4,036,050.00	58,655	\$3,832,085.00	638	1,697

Number of dogs in county March 1, 1917, 1,205; March 1, 1918, 1,092.

Number of sheep killed by dogs, year ending March 1, 1918, 1.

Number of sheep killed by wolves, year ending March 1, 1918, 25.

Mortality of swine from cholera, year ending March 1, 1917, 5; March 1, 1918, 698.

FARM AND CROP STATISTICS.—LINCOLN COUNTY.

Table showing acres, product and value of field crops in the county for 1917 and 1918.

Crops.	1917.			1918.		
	Acres.	Product.	Value.	Acres.	Product.	Value.
Winter wheat.....bu.	34,528	207,168	\$403,977.60	18,410	147,280	\$287,196.00
Spring wheat.....bu.						
Corn.....bu.	126,921	126,921	152,305.20	63,167	126,334	189,501.00
Oats.....bu.	19,808	198,080	132,713.60	11,617	162,738	123,604.88
Rye.....bu.	492	2,460	4,157.40	1,458	16,038	25,179.66
Barley.....bu.	1,462	21,930	21,930.00	700	12,600	13,104.00
Emmer ("speltz").....bu.						
Irish potatoes.....bu.	527	14,756	22,871.80	543	6,516	10,751.40
Sweet potatoes.....bu.				11	385	866.25
Cowpeas.....tons				1	2	33.00
Flax.....bu.						
Broom corn.....lbs.				2	550	55.00
Millet.....tons	293	293	2,930.00	410	513	6,156.00
Sugar beets.....tons						
Sorghum for syrup.....gals.				21	630	693.00
for seed.....bu.	279	1,953	2,929.50	1,617	12,936	24,578.40
for hay.....tons	8,165	12,248	85,736.00	2,563	3,204	27,234.00
Milo for grain.....bu.	174	174	243.60	355	3,195	5,112.00
for stover*.....tons					355	2,307.50
for hay.....tons				40	50	375.00
Kafir for grain.....bu.	16,023	16,023	22,432.20	10,683	85,464	136,742.40
for stover*.....tons		8,011	64,088.00		16,025	88,137.50
for hay.....tons	3,669	2,754	27,510.00	2,340	3,510	28,080.00
Feterita for grain.....bu.	1,281	11,529	19,829.88	1,691	21,983	35,392.63
for stover*.....tons		1,281	7,686.00		2,537	11,416.50
for hay.....tons	75	75	525.00	312	468	3,042.00
Sudan grass.....tons	63	63	724.50	171	342	3,762.00
Jerusalem corn.....tons	5	3	30.00			
Alfalfa.....tons	9,321	18,642	372,840.00	9,456	16,548	364,056.00
Timothy.....tons						
Clover.....tons						
Blue grass.....tons						
Sweet clover.....tons	6	†			‡	
Orchard grass.....tons						
Other tame grasses.....tons				2		
Prairie hay.....tons	5,759	2,879	43,185.00	4,976	2,488	37,320.00
Totals.....	223,851		\$1,388,645.28	130,546		\$1,424,696.12

Corn on hand March 1, 1917, 123,529 bushels; March 1, 1918, 16,645 bushels.

Wheat on hand March 1, 1917, 82,399 bushels; March 1, 1918, 22,047 bushels.

Prairie grass for pasture March 1, 1918: Acres fenced, 151,283; acres not fenced, 1,579.

* Forage after harvesting grain. † Product of 1916. ‡ Product of 1917.

SUMMARY.—LINCOLN COUNTY.

Showing quantity and value of farm products in the county for 1917 and 1918.

Products.	1917.		1918.	
	Quantity.	Value.	Quantity.	Value.
Field crops.....acres	228,851	\$1,388,645.28	130,546	\$1,424,696.12
Animals slaughtered or sold for slaughter.....		1,264,623.00		1,364,931.00
Poultry and eggs sold.....		195,428.00		184,944.00
Wool clip.....lbs.	4,300	1,204.00	9,060	4,892.40
Cheese.....lbs.				
Butter.....lbs.	205,899	61,769.70	194,082	75,691.98
Condensed milk.....lbs.				
Milk sold.....		93,594.00		146,755.00
Honey and beeswax.....lbs.	227	41.46	3,515	879.75
Wood marketed.....		85.00		484.00
Totals.....		\$3,005,390.44		\$3,203,274.25

Number of cream separators March 1, 1917, 911; March 1, 1918, 976.

Number of silos March 1, 1917, 112; March 1, 1918, 146.

Number of tractors March 1, 1917, 40; March 1, 1918, 53.

LINN COUNTY.

Organized in 1855; area, 385,879 acres; population, 15,083; rank in population, 42; assessed valuation, \$23,611,361; miles of railroad, main track, 90.37; county seat, Mound City; population, 750.

POPULATION AND VALUATION.—LINN COUNTY.

Table showing total population, by townships and cities, for 1917 and 1918, and the assessed valuation of the municipal townships and cities of 1918.

Townships (and cities).	Population.		Assessed valuation of property, 1918.				
	1917.	1918.	Land.	City lots.	Personal.	Railroad, etc.	Total.
The county.....	15,116	15,083	\$13,210,413	\$1,519,385	\$5,450,453	\$3,431,110	\$23,611,361
Blue Mound.....	645	585		\$149,045	\$194,390	\$22,857	\$366,292
Blue Mound tp.....	898	844	\$1,447,048		397,500	400,503	2,245,051
Centerville tp.....		1,451	1,702,885	30,280	558,288	541,104	2,832,557
Parker.....	390	392		124,370	166,520	30,955	321,845
Liberty tp.....	1,162	1,197	1,514,645	8,810	507,810	386,778	2,418,043
La Cygne.....	984	967		263,065	240,180	70,577	573,822
Lincoln tp.....	945	872	1,159,469		286,615	135,234	1,581,318
Mound City.....	682	750		279,995	234,515	9,640	524,150
Mound City tp.....	757	754	1,038,453		259,445	183,547	1,481,445
Paris tp.....		1,177	1,319,720		377,745	33,814	1,731,279
Pleasanton.....	1,394	1,358		581,815	512,690	112,394	1,206,899
Potosi tp.....	1,220	1,379	1,257,222		394,810	502,618	2,154,650
Scott tp.....		1,035	1,298,527		405,765	250,864	1,955,156
Prescott.....	294	299		65,475	100,255	22,313	188,043
Sheridan tp.....	803	797	1,052,504		306,540	405,553	1,764,597
Stanton tp.....		549	679,014		252,040	96,014	1,027,068
Valley tp.....		711	740,926	16,530	255,345	226,345	1,239,146

LIVESTOCK.—LINN COUNTY.

Table showing number, value and mortality of livestock in the county for 1917 and 1918.

Livestock.	1917.		1918.		Mortality.	
	Number.	Value.	Number.	Value.	1917.	1918.
Horses.....	10,009	\$1,201,080.00	10,031	\$1,113,441.00	238	67
Mules and asses.....	3,117	420,795.00	2,465	345,100.00	41	12
Milk cows.....	6,687	501,525.00	9,511	779,902.00	147	103
Other cattle.....	16,533	826,650.00	16,714	902,556.00	299	253
Sheep.....	2,383	26,213.00	3,762	47,025.00	165	39
Swine.....	19,082	391,181.00	18,911	425,497.50	831	186
Totals.....	57,811	\$3,367,444.00	61,394	\$3,613,521.50	1,721	660

Number of dogs in county March 1, 1917, 1,335; March 1, 1918, 1,614.

Number of sheep killed by dogs, year ending March 1, 1917, 22; March 1, 1918, 13.

Number of sheep killed by wolves, year ending March 1, 1917, 17; March 1, 1918, 23.

Mortality of swine from cholera, year ending March 1, 1917, 601; March 1, 1918, 87.

FARM AND CROP STATISTICS.—LINN COUNTY.

Table showing acres, product and value of field crops in the county for 1917 and 1918.

Crops.	1917.			1918.		
	Acres.	Product.	Value.	Acres.	Product.	Value.
Winter wheat.....bu.	7,706	146,414	\$307,469.40	27,394	602,668	\$1,229,442.72
Spring wheat.....bu.	178	3,026	6,173.04			
Corn.....bu.	93,585	2,058,870	2,223,579.60	62,529	375,174	570,264.48
Oats.....bu.	20,901	668,832	374,545.92	26,273	630,552	428,775.36
Rye.....bu.	340	7,140	11,923.80	591	10,638	16,276.14
Barley.....bu.	68	1,836	1,836.00	133	2,660	2,660.00
Emmer ("speltz").....bu.				4	92	67.16
Irish potatoes.....bu.	551	22,040	35,264.00	674	13,480	20,220.00
Sweet potatoes.....bu.	10	1,000	1,440.00	2	66	115.50
Cowpeas.....tons	65	81	1,296.00	22	33	544.50
Flax.....bu.	7,585	53,095	143,356.50	5,716	28,580	92,885.00
Broom corn.....lbs.				28	8,400	924.00
Millet.....tons	404	808	8,080.00	135	203	2,233.00
Sugar beets.....tons						
Sorghum for syrup.....gals.	4	360	252.00	357	21,420	23,562.00
for seed.....bu.	365	4,745	7,117.50	226	2,260	3,955.00
for hay.....tons	1,146	2,865	20,055.00	1,104	2,208	19,872.00
Milo for grain.....bu.	78	1,248	1,560.00	200	2,000	3,100.00
for stover*.....tons		234	1,170.00		600	3,000.00
for hay.....tons	44	176	1,056.00	27	81	526.50
Kafir for grain.....bu.	12,642	227,556	341,334.00	8,603	51,618	80,007.90
for stover*.....tons		34,764	173,820.00		17,206	86,030.00
for hay.....tons	227	852	5,112.00	196	392	2,744.00
Feterita for grain.....bu.	142	1,420	1,917.00	246	2,952	4,723.20
for stover*.....tons		426	1,704.00		738	3,690.00
for hay.....tons	62	217	1,302.00	20	80	560.00
Sudan grass.....tons	178	712	5,696.00	68	170	1,700.00
Jerusalem corn.....tons	6	22	132.00	4	8	56.00
Alfalfa.....tons	2,202	6,606	132,120.00	2,690	5,380	134,500.00
Timothy.....tons	24,504			23,841		
Clover.....tons	8,278			3,412		
Blue grass.....tons	9,230			15,663		
Sweet clover.....tons	102	† 28,022	448,352.00	94	‡ 27,000	594,000.00
Orchard grass.....tons	5			9		
Other tame grasses.....tons	1,703			1,952		
Prairie hay.....tons	12,263	12,263	183,945.00	11,348	5,674	107,806.00
Totals.....	204,574		\$4,441,608.76	193,561		\$3,434,240.46

Corn on hand March 1, 1917, 135,746 bushels; March 1, 1918, 358,824 bushels.

Wheat on hand March 1, 1917, 75 bushels; March 1, 1918, 3,763 bushels.

Prairie grass for pasture March 1, 1918: Acres fenced, 39,156; acres not fenced, 4,392.

* Forage after harvesting grain. † Product of 1916. ‡ Product of 1917.

SUMMARY.—LINN COUNTY.

Showing quantity and value of farm products in the county for 1917 and 1918.

Products.	1917.		1918.	
	Quantity.	Value.	Quantity.	Value.
Field crops.....acres	204,574	\$4,441,608.76	193,561	\$3,434,240.46
Animals slaughtered or sold for slaughter.....		675,583.00		971,558.00
Poultry and eggs sold.....		181,181.00		209,027.00
Wool clip.....lbs.	8,150	2,282.00	7,365	3,977.10
Cheese.....lbs.				
Butter.....lbs.	163,260	48,978.00	159,942	62,377.38
Condensed milk.....lbs.				
Milk sold.....		78,179.00		120,456.00
Honey and beeswax.....lbs.	22,363	4,050.94	4,460	1,125.50
Wood marketed.....		1,679.00		5,071.00
Totals.....		\$5,433,541.70		\$4,807,832.44

Number of cream separators March 1, 1917, 668; March 1, 1918, 695.

Number of silos March 1, 1917, 87; March 1, 1918, 78.

Number of tractors March 1, 1917, 12; March 1, 1918, 15.

LOGAN COUNTY.

Organized in 1888; area, 688,170 acres; population, 3,521; rank in population, 93; assessed valuation, \$8,796,366; miles of railroad, main track, 39.95; county seat, Russell Springs; population, 139.

POPULATION AND VALUATION.—LOGAN COUNTY.

Table showing total population, by townships and cities, for 1917 and 1918, and the assessed valuation of the municipal townships and cities of 1918.

Townships (and cities).	Population.		Assessed valuation of property, 1918.				
	1917.	1918.	Land.	City lots.	Personal.	Railroad, etc.	Total.
The county.....	3,554	3,521	\$4,283,625	\$413,346	\$2,151,053	\$1,948,342	\$8,796,366
Augustine tp.....	162	139	\$198,625	\$1,081	\$60,345		\$260,051
Elkader tp.....	178	144	414,815		88,547		503,362
Lees tp.....	161	148	190,961	888	127,621		319,470
Logansport tp.....	195	197	340,605		183,213		523,818
McAllaster tp.....	193	198	382,980	4,335	157,427	\$473,765	1,018,507
Monument tp.....	319	342	599,315	23,844	210,837	432,716	1,266,712
Oakley.....	757	760		292,120	415,072	130,206	837,398
Oakley tp.....	428	429	694,285		164,875	371,617	1,230,777
Paxton tp.....	122	120	202,933		129,975		332,908
Russell Springs.....	131	139		34,328	48,174	140	82,642
Russell Springs tp.	269	250	342,166		122,108	414	464,718
Western tp.....	204	181	330,700		129,525	44,701	504,926
Winona tp.....	435	474	586,210	56,750	313,334	494,783	1,451,077

LIVESTOCK.—LOGAN COUNTY.

Table showing number, value and mortality of livestock in the county for 1917 and 1918.

Livestock.	1917.		1918.		Mortality.	
	Number.	Value.	Number.	Value.	1917.	1918.
Horses.....	6,260	\$751,200.00	6,780	\$752,580.00	54	57
Mules and asses.....	921	124,335.00	627	87,780.00	1	2
Milk cows.....	2,677	200,775.00	3,466	284,212.00	39	29
Other cattle.....	12,934	646,700.00	15,308	826,632.00	154	293
Sheep.....	5,369	59,059.00	4,852	60,650.00		114
Swine.....	1,924	39,442.00	1,315	29,587.50	27	10
Totals.....	30,085	\$1,821,511.00	32,348	\$2,041,441.50	275	505

Number of dogs in county March 1, 1917, 509; March 1, 1918, 483.

Number of sheep killed by dogs, year ending March 1, 1917, 15.

Number of sheep killed by wolves, year ending March 1, 1917, 108.

Mortality of swine from cholera, year ending March 1, 1917, 5.

FARM AND CROP STATISTICS.—LOGAN COUNTY.

Table showing acres, product and value of field crops in the county for 1917 and 1918.

Crops.	1917.			1918.		
	Acres.	Product.	Value.	Acres.	Product.	Value.
Winter wheat.....bu.	2,311	9,244	\$19,689.72	2,534	15,204	\$29,647.80
Spring wheat.....bu.	182	364	753.48	200	1,248	2,408.64
Corn.....bu.	34,874	104,622	127,638.84	24,592	196,736	275,430.40
Oats.....bu.	2,584			1,777	3,554	2,665.50
Rye.....bu.	300			75	300	480.00
Barley.....bu.	21,035	63,105	63,105.00	17,032	153,288	145,623.60
Emmer ("speltz").....bu.	15					
Irish potatoes.....bu.	62	1,860	2,790.00	79	2,607	3,597.66
Sweet potatoes.....bu.	1	40	80.00			
Cowpeas.....tons	5	6	96.00	7	11	181.50
Flax.....bu.	10					
Broom corn.....lbs.	165	37,125	5,197.50	165	49,500	4,950.00
Millet.....tons	2,726	2,045	20,450.00	2,875	2,875	34,500.00
Sugar beets.....tons						
Sorghum for syrup.....gals.	15			228		
for seed.....bu.	2,831	5,662	9,059.20	3,517	38,687	69,636.60
for hay.....tons	13,769	10,326	103,260.00	13,854	20,781	197,419.50
Milo for grain.....bu.	4,726			3,429	30,861	44,748.45
for stover*.....tons		1,181	5,905.00		4,286	27,859.00
for hay.....tons	150			22	33	264.00
Kafir for grain.....bu.	5,900			4,698	42,282	67,651.20
for stover*.....tons		8,850	61,950.00		7,047	35,235.00
for hay.....tons	435	435	4,350.00	50	125	1,125.00
Feterita for grain.....bu.	1,813	3,626	5,439.00	951	7,608	11,412.00
for stover*.....tons		907	5,442.00		1,189	7,134.00
for hay.....tons	190	95	760.00	321	482	3,856.00
Sudan grass.....tons	119	119	1,190.00	253	569	5,690.00
Jeusalem corn.....tons	202	202	2,020.00	161	403	3,627.00
Alfalfa.....tons	3,831	10,344	206,880.00	3,243	8,108	170,268.00
Timothy.....tons						
Clover.....tons	4					
Blue grass.....tons						
Sweet clover.....tons	59	† 55	880.00	2	‡	
Orchard grass.....tons						
Other tame grasses.....tons						
Prairie hay.....tons	1,716	1,716	27,456.00	533	400	6,000.00
Totals.....	100,030		\$674,391.74	80,598		\$1,151,410.85

Corn on hand March 1, 1917, 14,348 bushels; March 1, 1918, 2,758 bushels.

Wheat on hand March 1, 1917, 2,840 bushels; March 1, 1918, 131 bushels.

Prairie grass for pasture March 1, 1918: Acres fenced, 270,705; acres not fenced, 22,955.

* Forage after harvesting grain. † Product of 1916. ‡ Product of 1917.

SUMMARY.—LOGAN COUNTY.

Showing quantity and value of farm products in the county for 1917 and 1918.

Products.	1917.		1918.	
	Quantity.	Value.	Quantity.	Value.
Field crops.....acres	100,030	\$674,391.74	80,598	\$1,151,410.85
Animals slaughtered or sold for slaughter.....		141,363.00		200,200.00
Poultry and eggs sold.....		30,275.00		26,597.00
Wool clip.....lbs.	4,700	1,316.00	1,300	702.00
Cheese.....lbs.	50	8.50		
Butter.....lbs.	23,558	7,067.40	21,605	8,425.95
Condensed milk.....lbs.				
Milk sold.....		43,543.00		65,363.00
Honey and beeswax.....lbs.	100	18.00		
Wood marketed.....				
Totals.....		\$897,982.64		\$1,452,698.80

Number of cream separators March 1, 1917, 234; March 1, 1918, 282.

Number of silos March 1, 1917, 34; March 1, 1918, 34.

Number of tractors March 1, 1917, 14; March 1, 1918, 17.

LYON COUNTY.

Organized in 1858; area, 546,066 acres; population, 25,950; rank in population, 16; assessed valuation, \$47,949,196; miles of railroad, main track, 106.86; county seat, Emporia; population, 10,842.

POPULATION AND VALUATION.—LYON COUNTY.

Table showing total population, by townships and cities, for 1917 and 1918, and the assessed valuation of the municipal townships and cities of 1918.

Townships (and cities).	Population.		Assessed valuation of property, 1918.					
	1917.	1918.	Land.	City lots.	Personal.	Railroad, etc.	Total.	
The county.....	25,637	25,950	\$20,905,086	\$9,109,345	\$11,387,940	\$6,546,825	\$47,949,196	
Allen.....	197	265		\$92,431	\$90,245	\$30,985	\$213,661	
Agnes City tp.	1,177	1,374	1,187	\$1,996,768	35,775	674,440	587,021	3,294,004
Americus.....	451	424		156,365	164,995	31,007	352,367	
Americus tp.	1,341	1,792	1,347	2,263,260	741,145	268,011	3,272,416	
Olpe.....	236	260		83,790	112,270	33,054	229,114	
Center tp.	1,404	1,640	1,403	2,331,327	720,425	470,016	3,521,768	
Hartford.....	576	550		249,440	223,190	30,634	503,264	
Elmendaro tp.	1,398	1,974	1,398	2,236,830	552,800	38,505	2,828,135	
Emporia.....	10,645	10,842		8,017,986	4,074,940	621,738	12,714,664	
Emporia tp.	2,189	12,834	2,268	2,862,285	203,300	709,080	1,583,987	5,358,652
Fremont tp.		1,065	1,084	1,727,702	573,565	171,355	2,472,622	
Admire.....	*	218		79,046	160,230	34,116	273,392	
Ivy tp.	527	298	516	787,983	278,035	322,732	1,388,750	
Neosho Rapids....	266	272		42,440	59,200	63,395	165,035	
Jackson tp.	1,267	1,533	1,230	2,380,579	622,270	1,092,152	4,095,001	
Pike tp.		954	943	1,375,781	392,175	515,558	2,295,896	
Reading.....	351	372		105,965	198,880	66,545	371,390	
Reading tp.	694	1,045	715	1,618,928	537,855	428,955	2,585,738	
Waterloo tp.		869	874	1,323,643	502,200	157,059	2,013,327	

* Not reported separately from township in 1917.

LIVESTOCK.—LYON COUNTY.

Table showing number, value and mortality of livestock in the county for 1917 and 1918.

Livestock.	1917.		1918.		Mortality.	
	Number.	Value.	Number.	Value.	1917.	1918.
Horses.....	12,438	\$1,492,560.00	13,085	\$1,452,435.00	143	225
Mules and asses....	3,074	414,990.00	2,630	368,200.00	11	14
Milk cows.....	6,888	516,600.00	9,169	751,858.00	137	181
Other cattle.....	35,966	1,798,300.00	40,782	2,202,228.00	276	612
Sheep.....	13,218	145,398.00	8,763	109,537.50	22	46
Swine.....	15,655	320,927.50	23,458	527,805.00	282	861
Totals.....	87,239	\$4,688,775.50	97,887	\$5,412,063.50	871	1,939

Number of dogs in county March 1, 1917, 1,737; March 1, 1918, 1,806.

Number of sheep killed by dogs, year ending March 1, 1917, 18; March 1, 1918, 9.

Number of sheep killed by wolves, year ending March 1, 1918, 24.

Mortality of swine from cholera, year ending March 1, 1917, 251; March 1, 1918, 373.

FARM AND CROP STATISTICS.—LYON COUNTY.

Table showing acres, product and value of field crops in the county for 1917 and 1918.

Crops.	1917.			1918.		
	Acres.	Product.	Value.	Acres.	Product.	Value.
Winter wheat.....bu.	12,940	349,380	\$730,204.20	36,677	953,602	\$1,945,348.08
Spring wheat.....bu.	10	260	525.20			
Corn.....bu.	92,772	1,948,212	2,240,443.80	73,137	731,370	1,133,623.50
Oats.....bu.	16,884	658,476	428,009.40	27,963	727,038	523,467.36
Rye.....bu.	518	8,288	13,923.84	968	15,488	24,471.04
Barley.....bu.	138	4,140	4,140.00	178	5,340	5,874.00
Emmer ("speltz").....bu.						
Irish potatoes.....bu.	1,022	45,990	73,584.00	1,190	52,360	83,776.00
Sweet potatoes.....bu.						
Cowpeas.....tons	23	29	464.00			
Flax.....bu.	371	2,782	7,511.40	51	306	994.50
Broom corn.....lbs.	4	1,400	196.00	4	1,200	120.00
Millet.....tons	323	646	5,814.00	158	277	3,047.00
Sugar beets.....tons				20	120	1,140.00
Sorghum for syrup.....gals.	73	4,745	3,321.50	119	7,140	7,854.00
for seed.....bu.	886	13,290	19,935.00	1,292	16,796	29,393.00
for hay.....tons	1,724	6,896	34,480.00	1,382	4,146	29,022.00
Milo for grain.....bu.	517	10,340	13,442.00	1,276	17,864	28,582.40
for stover*.....tons		1,809	5,427.00		2,552	12,760.00
for hay.....tons	12	42	252.00	90	203	1,319.50
Kafir for grain.....bu.	27,737	138,685	208,027.50	21,583	194,247	310,795.20
for stover*.....tons		97,079	388,316.00		53,958	296,769.00
for hay.....tons	80	300	1,500.00	80	240	1,680.00
Feterita for grain.....bu.	644	14,812	19,699.96	1,116	16,740	26,784.00
for stover*.....tons		2,093	6,279.00		3,069	15,345.00
for hay.....tons	178	712	3,560.00	140	420	2,940.00
Sudan grass.....tons	66	330	2,640.00	194	679	8,148.00
Jerusalem corn.....tons	1	4	20.00	4	12	84.00
Alfalfa.....tons	26,473	92,656	1,760,464.00	31,271	85,995	1,891,890.00
Timothy.....tons	832			854		
Clover.....tons	1,310			891		
Blue grass.....tons	1,485			1,019		
Sweet clover.....tons	388	† 4,040	60,600.00	269	‡ 2,000	40,000.00
Orchard grass.....tons	23			70		
Other tame grasses.....tons	207			100		
Prairie hay.....tons	27,689	27,689	387,646.00	26,343	19,757	355,626.00
Totals.....	215,330		\$6,420,425.80	228,439		\$6,780,853.58

Corn on hand March 1, 1917, 53,716 bushels; March 1, 1918, 385,115 bushels.

Wheat on hand March 1, 1917, 728 bushels; March 1, 1918, 9,383 bushels.

Prairie grass for pasture March 1, 1918: Acres fenced, 149,085; acres not fenced, 6,187.

* Forage after harvesting grain. † Product of 1916. ‡ Product of 1917.

SUMMARY —LYON COUNTY.

Showing quantity and value of farm products in the county for 1917 and 1918.

Products.	1917.		1918.	
	Quantity.	Value.	Quantity.	Value.
Field crops.....acres	215,330	\$6,420,425.80	228,439	\$6,780,853.58
Animals slaughtered or sold for slaughter.....		1,820,550.00		2,672,295.00
Poultry and eggs sold.....		246,171.00		274,491.00
Wool clip.....lbs.	3,033	849.24	4,336	2,341.44
Cheese.....lbs.				
Butter.....lbs.	276,444	83,167.20	229,457	89,540.73
Condensed milk.....lbs.				
Milk sold.....		139,774.00		246,695.00
Honey and beeswax.....lbs.	27,899	5,035.32	14,942	3,741.00
Wood marketed.....		1,621.00		1,704.00
Totals.....		\$8,717,593.56		\$10,071,661.75

Number of cream separators March 1, 1917, 1,203; March 1, 1918, 1,348.

Number of silos March 1, 1917, 298; March 1, 1918, 256.

Number of tractors March 1, 1917, 25; March 1, 1918, 46.

MARION COUNTY.

Organized in 1865; area, 609,149 acres; population, 21,519; rank in population, 24; assessed valuation, \$49,450,010; miles of railroad, main track, 129.52; county seat, Marion; population, 1,785.

POPULATION AND VALUATION.—MARION COUNTY.

Table showing total population, by townships and cities, for 1917 and 1918, and the assessed valuation of the municipal townships and cities of 1918.

Townships (and cities).	Population.		Assessed valuation of property, 1918.				
	1917.	1918.	Land.	City lots.	Personal.	Railroad, etc.	Total.
The county.....	21,928	21,519	\$27,501,758	\$3,191,698	\$11,643,839	\$7,112,715	\$49,450,010
Tampa.....	256	277		\$92,915	\$221,886	\$21,612	\$336,422
Blaine tp.....	387	385	\$1,058,212		211,009	126,199	1,395,420
Catlin tp.....		635	1,299,442	11,550	435,374	422,201	2,168,567
Marion.....	2,001	1,785		812,990	722,085	183,668	1,718,743
Center tp.....	662	636	1,419,409		479,294	461,861	2,360,564
Clark tp.....		568	1,286,910		404,320	2,267	1,693,497
Lincolnville.....	278	262		87,500	159,347	30,893	277,740
Clear Creek tp.....	983	1,261	1,965,830		691,315	401,957	3,059,102
Colfax tp.....		485	1,322,000		398,285	305,965	2,026,250
Florence.....	1,310	1,362		301,280	300,108	172,075	773,463
Doyle tp.....	436	389	753,852		152,540	665,094	1,571,486
Durham.....	284	230		95,057	119,283	33,624	247,964
Durham Park tp.....	501	515	1,172,330		310,879	215,203	1,698,412
East Branch tp.....		517	1,004,563		283,437	2,568	1,290,568
Fairplay tp.....		474	1,000,375	5,490	201,875	792,868	2,000,608
Gale tp.....		598	1,310,649	11,266	537,509	209,856	2,069,280
Grant tp.....		602	1,288,545		391,890	1,062	1,681,497
Lehigh tp.....		495	1,024,987		171,702	418,587	1,615,276
Lehigh.....	396	378		124,750	121,550	27,318	273,618
Liberty tp.....	842	843	1,206,894	6,220	315,523	3,062	1,531,699
Ramona.....	310	311		89,655	158,665	25,353	273,673
Logan tp.....	493	498	881,168		247,243		1,128,411
Lost Springs.....	227	260		84,710	137,479	51,816	274,005
Lost Springs tp.....	572	602	1,196,357		424,406	540,851	2,161,614
Menno tp.....		698	1,155,328		337,452		1,492,780
Burns.....	425	481		227,915	353,974	48,056	629,945
Milton tp.....	203	201	556,605		178,559	347,379	1,082,543
Moore tp.....		307	809,805		196,399	155,242	1,161,446
Peabody.....	1,424	1,425		703,530	682,059	227,196	1,612,785
Peabody tp.....	546	541	1,288,155		308,355	631,553	2,228,063
Hillsboro.....	1,363	1,380		470,140	471,635	29,546	971,321
Risley tp.....	690	694	1,133,147		355,273	237,065	1,725,485
Summit tp.....		414	865,427		204,165	30,465	1,100,057
West Branch tp.....		818	1,232,367	25,700	441,754	410	1,700,231
Wilson tp.....		728	1,269,401	41,030	517,210	289,834	2,117,475

LIVESTOCK.—MARION COUNTY.

Table showing number, value and mortality of livestock in the county for 1917 and 1918.

Livestock.	1917.		1918.		Mortality.	
	Number.	Value.	Number.	Value.	1917.	1918.
Horses.....	17,525	\$2,103,000.00	17,494	\$1,941,834.00	293	462
Mules and asses.....	1,516	204,660.00	1,216	170,240.00	18	18
Milk cows.....	9,095	682,125.00	10,550	865,100.00	145	315
Other cattle.....	37,445	1,872,250.00	36,673	1,980,342.00	684	1,818
Sheep.....	1,391	15,301.00	3,450	43,125.00	44	125
Swine.....	23,312	477,896.00	24,782	557,595.00	865	1,744
Totals.....	90,284	\$5,355,232.00	94,165	\$5,558,236.00	2,049	4,482

Number of dogs in county March 1, 1917, 2,250; March 1, 1918, 2,360.

Number of sheep killed by dogs, year ending March 1, 1918, 7.

Number of sheep killed by wolves, year ending March 1, 1917, 3; March 1, 1918, 25.

Mortality of swine from cholera, year ending March 1, 1917, 417; March 1, 1918, 1,011.

FARM AND CROP STATISTICS.—MARION COUNTY.

Table showing acres, product and value of field crops in the county for 1917 and 1918.

Crops.	1917.			1918.		
	Acres.	Product.	Value.	Acres.	Product.	Value.
Winter wheat.....bu.	66,530	1,064,480	\$2,203,473.60	110,110	2,312,310	\$4,647,743.10
Spring wheat.....bu.				16	288	573.12
Corn.....bu.	133,405	2,534,695	2,712,123.65	94,336	566,016	870,664.64
Oats.....bu.	64,338	2,187,492	1,312,495.20	61,768	1,914,808	1,340,365.60
Rye.....bu.	3,688	55,320	90,724.80	7,023	119,391	183,862.14
Barley.....bu.	176	5,280	5,280.00	394	9,850	10,835.00
Emmer ("speltz").....bu.				14	406	304.50
Irish potatoes.....bu.	769	34,605	51,907.50	879	21,096	32,909.76
Sweet potatoes.....bu.	21	1,260	2,016.00	6	270	540.00
Cowpeas.....tons	18	22	352.00	1	2	33.00
Flax.....bu.	25	150	405.00	11	55	178.75
Broom corn.....lbs.				10	3,000	300.00
Millet.....tons	1,123	1,685	15,165.00	981	1,226	13,486.00
Sugar beets.....tons						
Sorghum for syrup.....gals.	34	1,700	1,190.00	106	5,300	5,830.00
for seed.....bu.	671	2,013	3,019.50	1,056	8,448	14,784.00
for hay.....tons	5,955	19,354	116,124.00	6,299	18,897	132,279.00
Milo for grain.....bu.	377	3,770	5,655.00	204	2,448	3,916.80
for stover*.....tons		1,131	3,393.00		306	1,530.00
for hay.....tons	8	22	143.00	5	10	65.00
Kafir for grain.....bu.	12,087	84,609	118,452.60	7,552	52,864	84,582.40
for stover*.....tons		30,217	166,193.50		15,104	75,520.00
for hay.....tons	518	1,683	13,464.00	239	717	5,019.00
Feterita for grain.....bu.	490	5,880	7,350.00	483	4,830	7,245.00
for stover*.....tons		1,470	5,880.00		1,208	5,436.00
for hay.....tons	91	273	2,184.00	196	588	3,822.00
Sudan grass.....tons	81	243	2,187.00	387	1,161	11,610.00
Jerusalem corn.....tons				10	30	210.00
Alfalfa.....tons	25,993	75,380	1,281,460.00	28,325	70,813	1,487,073.00
Timothy.....tons	95			50		
Clover.....tons	64			23		
Blue grass.....tons	74			228		
Sweet clover.....tons	498	† 230	3,680.00	564	‡ 800	16,000.00
Orchard grass.....tons	8					
Other tame grasses.....tons	163			8		
Prairie hay.....tons	17,665	17,665	229,645.00	18,060	13,545	216,720.00
Totals.....	334,965		\$8,353,963.35	339,344		\$9,173,437.81

Corn on hand March 1, 1917, 119,564 bushels; March 1, 1918, 422,955 bushels.

Wheat on hand March 1, 1917, 36,945 bushels; March 1, 1918, 75,716 bushels.

Prairie grass for pasture March 1, 1918: Acres fenced, 158,625; acres not fenced, 3,386.

* Forage after harvesting grain. † Product of 1916. ‡ Product of 1917.

SUMMARY.—MARION COUNTY.

Showing quantity and value of farm products in the county for 1917 and 1918.

Products.	1917.		1918.	
	Quantity.	Value.	Quantity.	Value.
Field crops.....acres	334,965	\$8,353,963.35	339,344	\$9,173,437.81
Animals slaughtered or sold for slaughter.....		2,100,977.00		2,458,344.00
Poultry and eggs sold.....		276,985.00		295,476.00
Wool clip.....lbs.	4,936	1,382.08	3,744	2,021.76
Cheese.....lbs.	300	51.00	87	15.66
Butter.....lbs.	407,440	127,632.00	355,689	143,818.71
Condensed milk.....lbs.				
Milk sold.....		150,242.00		227,046.00
Honey and beeswax.....lbs.	12,339	2,238.02	11,961	2,965.50
Wood marketed.....		849.00		1,157.00
Totals.....		\$11,014,319.45		\$12,304,312.44

Number of cream separators March 1, 1917, 1,593; March 1, 1918, 1,684.

Number of silos March 1, 1917, 139; March 1, 1918, 176.

Number of tractors March 1, 1917, 66; March 1, 1918, 110.

MARSHALL COUNTY.

Organized in 1855; area, 578,200 acres; population, 21,883; rank in population, 22; assessed valuation, \$60,703,312; miles of railroad, main track, 142.06; county seat, Marysville; population, 2,309.

POPULATION AND VALUATION.—MARSHALL COUNTY.

Table showing total population, by townships and cities, for 1917 and 1918, and the assessed valuation of the municipal townships and cities of 1918.

Townships (and cities).	Population.		Assessed valuation of property, 1918.				
	1917.	1918.	Land.	City lots.	Personal.	Railroad, etc.	Total.
The county.....	22,135	21,883	\$33,984,610	\$4,435,020	\$17,329,420	\$4,954,262	\$60,703,312
Balderson tp.....	515	523	\$1,853,460	.....	\$615,010	\$341	\$2,468,811
Bigelow tp.....	524	572	1,124,680	33,420	522,820	314,115	1,995,035
Irving.....	386	370	.....	136,670	166,690	60,390	363,750
Blue Rapids tp.....	525	535	1,020,550	.....	375,360	241,130	1,637,040
Blue Rapids.....	1,483	1,540	.....	675,040	473,860	63,071	1,211,971
Blue Rpd's City tp.....	452	428	1,305,200	.....	316,070	385,805	2,007,075
Center tp.....	593	443	1,357,750	12,950	507,680	297,906	2,176,286
Clear Fork tp.....	394	413	1,008,880	.....	383,350	2,666	1,406,896
Cleveland tp.....	521	449	1,023,490	23,990	387,370	261,660	1,696,510
Cottage Hill tp.....	471	443	1,395,790	.....	579,920	284	1,975,994
Elm Creek tp.....	470	433	1,251,300	3,050	353,470	287,553	1,895,373
Franklin tp.....	695	676	1,757,440	63,690	695,020	191,203	2,707,353
Beattie.....	454	456	.....	140,090	237,980	30,801	408,871
Guittard tp.....	442	506	1,370,040	.....	398,670	231,135	1,999,845
Herkimer tp.....	647	630	1,561,710	.....	669,050	2,704	2,233,464
Lincoln tp.....	552	552	1,190,290	.....	475,540	5,440	1,671,270
Logan tp.....	761	771	1,565,190	59,120	654,630	227,737	2,506,677
Marysville.....	2,200	2,309	.....	1,375,270	1,148,200	86,550	2,610,020
Marysville tp.....	658	540	1,573,140	4,070	747,450	442,376	2,767,036
Axtell.....	738	714	.....	343,740	459,740	54,504	857,984
Murray tp.....	564	552	1,378,770	.....	484,030	249,519	2,112,319
Vermillion.....	300	282	.....	121,040	205,840	24,190	351,078
Noble tp.....	703	767	1,297,240	29,340	506,920	207,128	2,040,628
Oketo.....	251	223	.....	66,060	144,820	83	210,963
Oketo tp.....	570	553	1,527,700	13,780	702,080	232,782	2,476,342
Richland tp.....	558	763	1,792,070	.....	637,310	.....	2,429,380
Rock tp.....	533	498	1,297,010	.....	386,390	42,416	1,725,816
Summerfield.....	471	465	.....	267,890	339,720	15,506	623,116
St. Bridget tp.....	496	438	1,068,120	2,660	335,030	99,312	1,505,122
Frankfort.....	1,364	1,082	.....	668,960	685,740	111,308	1,466,008
Vermillion tp.....	525	674	1,274,870	11,310	480,880	518,499	2,285,559
Walnut tp.....	550	534	1,466,160	.....	571,960	3,180	2,041,300
Waterville.....	685	676	.....	382,880	847,170	22,768	1,252,818
Waterville tp.....	481	483	1,189,150	.....	434,540	222,700	1,846,390
Wells tp.....	603	590	1,322,610	.....	399,110	17,492	1,739,212

LIVESTOCK.—MARSHALL COUNTY.

Table showing number, value and mortality of livestock in the county for 1917 and 1918.

Livestock.	1917.		1918.		Mortality.	
	Number.	Value.	Number.	Value.	1917.	1918.
Horses.....	16,507	\$1,980,840.00	16,681	\$1,851,591.00	175	226
Mules and asses.....	3,520	475,200.00	3,007	420,980.00	16	37
Milk cows.....	10,455	784,125.00	12,345	1,012,290.00	104	331
Other cattle.....	34,267	1,713,350.00	31,629	1,707,966.00	446	1,148
Sheep.....	1,787	19,657.00	695	12,437.50	1	2
Swine.....	39,671	813,255.50	41,286	928,935.00	1,080	1,027
Totals.....	106,207	\$5,786,427.50	105,943	\$5,934,199.50	1,822	2,771

Number of dogs in county March 1, 1917, 2,389; March 1, 1918, 2,495.

Number of sheep killed by dogs, year ending March 1, 1917, 1; March 1, 1918, 5.

Number of sheep killed by wolves, year ending March 1, 1917, 2.

Mortality of swine from cholera, year ending March 1, 1917, 702; March 1, 1918, 384.

FARM AND CROP STATISTICS.—MARSHALL COUNTY.

Table showing acres, product and value of field crops in the county for 1917 and 1918.

Crops.	1917.			1918.		
	Acres.	Product.	Value.	Acres.	Product.	Value.
Winter wheat.....bu.	13,056	195,840	\$407,347.20	64,736	776,832	\$1,569,200.64
Spring wheat.....bu.	130	1,690	3,413.80	78	780	1,560.00
Corn.....bu.	210,375	5,680,125	6,588,945.00	167,150	1,002,900	1,454,205.00
Oats.....bu.	60,407	2,235,059	1,318,684.81	45,986	689,790	482,853.00
Rye.....bu.	644	10,948	18,611.60	1,575	20,475	33,783.75
Barley.....bu.	78	1,950	1,950.00	79	1,027	1,078.35
Emmer ("speltz").....bu.						
Irish potatoes.....bu.	1,593	100,359	140,502.60	1,694	32,186	46,025.98
Sweet potatoes.....bu.	1	77	117.81	3	60	114.00
Cowpeas.....tons						
Flax.....bu.						
Broom corn.....lbs.	15	3,750	525.00			
Millet.....tons	5,959	11,918	107,262.00	8,541	12,812	166,556.00
Sugar beets.....tons				5	30	285.00
Sorghum for syrup.....gals.	66	4,620	3,234.00	53	3,180	3,498.00
for seed.....bu.	139	2,085	3,753.00	156	1,560	3,120.00
for hay.....tons	2,608	7,824	46,944.00	2,350	4,113	41,130.00
Milo for grain.....bu.	31	527	790.50	18	270	418.50
for stover*.....tons		62	248.00			189.00
for hay.....tons	8	16	96.00	3	5	42.50
Kafir for grain.....bu.	1,723	18,953	28,429.50	1,079	8,632	14,242.80
for stover*.....tons		5,169	28,429.50		2,158	17,264.00
for hay.....tons	416	1,144	6,864.00	256	512	5,120.00
Feterita for grain.....bu.	62	1,550	2,325.00	80	1,040	1,612.00
for stover*.....tons		248	1,240.00		200	1,100.00
for hay.....tons	50	125	875.00	98	294	2,205.00
Sudan grass.....tons	104	390	3,900.00	167	334	4,008.00
Jerusalem corn.....tons	5	14	84.00	13	26	260.00
Alfalfa.....tons	24,717	64,264	1,156,752.00	29,158	36,448	911,200.00
Timothy.....tons	4,328			3,544		
Clover.....tons	634			382		
Blue grass.....tons	7,365			9,689		
Sweet clover.....tons	108	† 9,711	145,665.00	123	‡ 3,568	74,928.00
Orchard grass.....tons				7		
Other tame grasses.....tons	174			169		
Prairie hay.....tons	25,370	25,370	355,180.00	23,085	11,543	230,860.00
Totals.....	360,166		\$10,372,169.32	360,277		\$5,066,859.52

Corn on hand March 1, 1917, 855,942 bushels; March 1, 1918, 1,905,322 bushels.

Wheat on hand March 1, 1917, 49,075 bushels; March 1, 1918, 20,825 bushels.

Prairie grass for pasture March 1, 1918: Acres fenced, 116,834; acres not fenced, 474.

* Forage after harvesting grain. † Product of 1916. ‡ Product of 1917.

SUMMARY.—MARSHALL COUNTY.

Showing quantity and value of farm products in the county for 1917 and 1918.

Products.	1917.		1918.	
	Quantity.	Value.	Quantity.	Value.
Field crops.....acres	360,166	\$10,372,169.32	360,277	\$5,066,859.52
Animals slaughtered or sold for slaughter.....		1,811,985.00		2,453,378.00
Poultry and eggs sold.....		307,723.00		373,536.00
Wool clip.....lbs.	345	56.60	160	86.40
Cheese.....lbs.	1,325	225.25	395	71.10
Butter.....lbs.	389,587	116,876.10	330,237	128,792.43
Condensed milk.....lbs.				
Milk sold.....		208,830.00		270,461.00
Honey and beeswax.....lbs.	34,250	6,212.40	9,139	2,286.50
Wood marketed.....		2,744.00		1,673.00
Totals.....		\$12,826,861.67		\$8,297,143.95

Number of cream separators March 1, 1917, 1,657; March 1, 1918, 1,796.

Number of silos March 1, 1917, 101; March 1, 1918, 93.

Number of tractors March 1, 1917, 47; March 1, 1918, 39.

McPHERSON COUNTY.

Organized in 1870; area, 575,289 acres; population, 21,775; rank in population, 23; assessed valuation, \$56,078,761; miles of railroad, main track, 122.39; county seat, McPherson; population, 4,216.

POPULATION AND VALUATION.—McPHERSON COUNTY.

Table showing total population, by townships and cities, for 1917 and 1918, and the assessed valuation of the municipal townships and cities of 1918.

Townships (and cities).	Population.		Assessed valuation of property, 1918.				
	1917.	1918.	Land.	City lots.	Personal.	Railroad, etc.	Total.
The county	21,986	21,775	\$29,825,270	\$5,668,520	\$15,661,705	\$4,923,266	\$56,078,761
Battle Hill tp.	313	325	\$637,000	.....	\$212,045	.....	\$849,045
Bonaville tp.	207	194	465,090	.....	131,650	\$828	597,568
Canton	660	651	.....	\$277,370	338,300	66,917	682,587
Canton tp.	515	476	1,312,880	.....	345,975	496,822	2,155,677
Windom	248	247	.....	78,245	226,375	27,159	331,779
Castle tp.	408	409	979,120	.....	212,340	231,447	1,422,907
Delmore tp.	351	370	737,130	.....	294,720	.....	1,031,850
Galva	319	303	.....	71,675	173,275	51,990	296,940
Empire tp.	518	565	1,457,870	.....	445,570	471,101	2,374,541
Groveland tp.	554	580	1,441,720	5,840	462,535	228,931	2,139,026
Gypsum Creek tp.	594	594	990,490	22,080	545,380	307	1,558,257
Harper tp.	444	430	979,360	.....	417,520	.....	1,396,880
Hayes tp.	542	529	1,452,120	.....	485,180	475	1,937,775
Jackson tp.	424	438	1,352,450	16,295	396,520	256,858	2,022,123
King City tp.	529	513	1,439,990	10,175	375,505	330,993	2,156,663
Little Valley tp. .	500	549	1,254,190	.....	394,415	48,270	1,696,875
Lone Tree tp.	607	617	1,445,610	.....	356,420	6,475	1,808,505
Marquette	788	741	.....	411,670	423,430	50,868	885,968
Marquette tp.	505	480	1,037,900	.....	464,325	276,325	1,778,550
McPherson	4,254	4,216	.....	2,894,645	2,622,835	266,952	5,784,432
McPherson tp.	562	586	1,463,660	6,800	423,315	563,261	2,457,036
Meridian tp.	571	588	1,414,280	.....	220,120	5,759	1,640,159
Moundridge	701	716	.....	299,780	424,990	20,178	744,948
Mound tp.	583	598	1,482,620	.....	444,040	229,992	2,156,652
New Gottland tp. .	432	423	1,004,860	.....	392,865	182,611	1,580,336
Lindsborg	2,207	2,008	.....	1,327,730	1,287,695	123,780	2,739,205
Smoky Hill tp.	543	549	1,400,790	.....	701,815	355,824	2,458,429
S. Sharp's Creek tp.	344	354	826,500	.....	264,095	238	1,090,833
Spring Valley tp. .	680	654	1,447,950	.....	553,250	.....	2,001,200
Inman	504	493	.....	246,215	294,570	32,951	573,736
Superior tp.	623	626	1,399,570	.....	323,440	237,636	1,960,646
Turkey Creek tp. .	515	502	1,409,460	.....	388,985	1,029	1,799,474
Union tp.	441	451	992,660	.....	618,210	357,289	1,968,159

LIVESTOCK.—McPHERSON COUNTY.

Table showing number, value and mortality of livestock in the county for 1917 and 1918.

Livestock.	1917.		1918.		Mortality.	
	Number.	Value.	Number.	Value.	1917.	1918.
Horses	16,553	\$1,986,360.00	16,664	\$1,849,704.00	273	317
Mules and asses	2,488	335,880.00	2,109	295,260.00	21	21
Milk cows	7,493	561,975.00	9,377	768,914.00	71	123
Other cattle	37,910	1,895,500.00	36,697	1,981,638.00	390	854
Sheep	2,345	25,795.00	5,757	71,962.50	31	31
Swine	22,957	470,618.50	28,780	647,550.00	652	591
Totals	89,746	\$5,276,128.50	99,384	\$5,615,028.50	1,438	1,937

Number of dogs in county March 1, 1917, 1,779; March 1, 1918, 1,855.

Number of sheep killed by dogs, year ending March 1, 1917, 5; March 1, 1918, 14.

Number of sheep killed by wolves, year ending March 1, 1917, 1; March 1, 1918, 2.

Mortality of swine from cholera, year ending March 1, 1917, 282; March 1, 1918, 233.

FARM AND CROP STATISTICS.—McPHERSON COUNTY.

Table showing acres, product and value of field crops in the county for 1917 and 1918.

Crops.	1917.			1918.		
	Acres.	Product.	Value.	Acres.	Product.	Value.
Winter wheat.....bu.	127,724	1,915,860	\$3,927,513.00	193,848	3,489,264	\$7,013,420.64
Spring wheat.....bu.	60	780	1,552.20	10	150	298.50
Corn.....bu.	110,291	1,433,783	1,548,485.64	72,750	436,500	646,020.00
Oats.....bu.	58,973	1,592,271	987,208.02	40,360	1,049,360	776,526.40
Rye.....bu.	8,249	115,486	184,777.60	10,960	197,280	305,784.00
Barley.....bu.	1,465	36,625	36,258.75	2,150	51,600	56,760.00
Emmer ("speltz").....bu.				8	200	158.00
Irish potatoes.....bu.	695	34,055	54,488.00	803	14,454	23,126.40
Sweet potatoes.....bu.	6	600	1,050.00	3	126	252.00
Cowpeas.....tons	17	21	336.00	8	12	198.00
Flax.....bu.						
Broom corn.....lbs.	140	56,000	7,840.00	188	56,400	6,768.00
Millet.....tons	1,190	1,785	17,850.00	550	688	7,568.00
Sugar beets.....tons						
Sorghum for syrup.....gals.	23	989	692.30	25	1,250	1,375.00
for seed.....bu.	126	1,638	2,457.00	257	2,056	3,803.60
for hay.....tons	3,370	9,268	55,608.00	2,341	5,853	40,971.00
Milo for grain.....bu.	543	10,860	15,204.00	496	6,944	11,110.40
for stover*.....tons		1,629	4,887.00		868	4,774.00
for hay.....tons	35	96	624.00	33	66	396.00
Kafir for grain.....bu.	6,713	73,843	110,764.50	3,272	26,176	41,881.60
for stover*.....tons		23,495	93,980.00		6,544	32,720.00
for hay.....tons	2,156	7,007	49,049.00	1,504	3,760	28,200.00
Feterita for grain.....bu.	181	2,353	3,529.50	399	5,187	8,039.85
for stover*.....tons		543	2,172.00		998	3,992.00
for hay.....tons	37	111	777.00	52	130	780.00
Sudan grass.....tons	335	1,089	9,256.50	1,279	3,837	42,207.00
Jerusalem corn.....tons				7	18	135.00
Alfalfa.....tons	20,762	58,134	988,278.00	23,273	58,183	1,280,026.00
Timothy.....tons						
Clover.....tons	2			16		
Blue grass.....tons	3			5		
Sweet clover.....tons	77	† 100	1,650.00	79	‡ 100	2,000.00
Orchard grass.....tons	3			4		
Other tame grasses.....tons				50		
Prairie hay.....tons	18,098	22,622	294,086.00	15,853	11,890	190,240.00
Totals.....	361,274		\$8,400,374.01	370,583		\$10,529,531.39

Corn on hand March 1, 1917, 179,739 bushels; March 1, 1918, 347,897 bushels.

Wheat on hand March 1, 1917, 97,326 bushels; March 1, 1918, 185,309 bushels.

Prairie grass for pasture March 1, 1918: Acres fenced, 123,368; acres not fenced, 1,740.

* Forage after harvesting grain. † Product of 1916. ‡ Product of 1917.

SUMMARY.—McPHERSON COUNTY.

Showing quantity and value of farm products in the county for 1917 and 1918.

Products.	1917.		1918.	
	Quantity.	Value.	Quantity.	Value.
Field crops.....acres	361,274	\$8,400,374.01	370,583	\$10,529,531.39
Animals slaughtered or sold for slaughter.....		1,725,173.00		2,355,638.00
Poultry and eggs sold.....		295,713.00		337,949.00
Wool clip.....lbs.	2,915	816.20	3,800	2,052.00
Cheese.....lbs.	890	151.30	812	146.16
Butter.....lbs.	394,860	120,945.00	394,722	157,585.71
Condensed milk.....lbs.				
Milk sold.....		131,097.00		246,467.00
Honey and beeswax.....lbs.	8,969	1,628.02	6,528	1,657.25
Wood marketed.....		242.00		296.00
Totals.....		\$10,676,139.53		\$13,631,322.51

Number of cream separators March 1, 1917, 1,627; March 1, 1918, 1,757.

Number of silos March 1, 1917, 186; March 1, 1918, 239.

Number of tractors March 1, 1917, 143; March 1, 1918, 182.

MEADE COUNTY.

Organized in 1885; area, 622,709 acres; population, 5,740; rank in population, 83; assessed valuation, \$12,815,142; miles of railroad, main track, 33.47; county seat, Meade; population, 783.

POPULATION AND VALUATION.—MEADE COUNTY.

Table showing total population, by townships and cities, for 1917 and 1918, and the assessed valuation of the municipal townships and cities of 1918.

Townships (and cities).	Population.		Assessed valuation of property, 1918.				
	1917.	1918.	Land.	City lots.	Personal.	Railroad, etc.	Total.
The County.....	6,061	5,740	\$7,537,589	\$643,864	\$3,087,256	\$1,546,433	\$12,815,142
Cimarron tp.....	301	437	\$42,409	.....	\$233,740	\$362	\$656,511
Crooked Creek tp.	344	344	652,521	.....	192,692	1,315	846,528
Fowler.....	521	402	.....	162,030	225,136	28,033	415,199
Fowler tp.....	637	598	1,419,111	.....	228,076	463,821	2,111,008
Logan tp.....	499	507	799,426	.....	297,316	1,963	1,098,705
Meade.....	917	783	.....	296,534	407,347	56,076	759,957
Meade Center tp..	492	466	1,075,031	.....	287,342	293,356	1,655,729
Mertilla tp.....	485	488	1,199,508	2,885	262,977	283,194	1,748,564
Odee tp.....	409	379	446,462	.....	183,368	669	630,499
Sand Creek tp....	395	396	456,117	.....	279,318	.....	735,435
West Plains.....	442	351	.....	182,415	238,839	42,861	464,115
West Plains tp....	619	589	1,067,004	.....	251,105	374,783	1,692,892

LIVESTOCK.—MEADE COUNTY.

Table showing number, value and mortality of livestock in the county for 1917 and 1918.

Livestock.	1917.		1918.		Mortality.	
	Number.	Value.	Number.	Value.	1917.	1918.
Horses.....	7,153	\$858,360.00	7,291	\$809,301.00	191	281
Mules and asses.....	1,912	258,120.00	1,766	247,240.00	29	19
Milk cows.....	2,909	218,175.00	4,023	330,296.00	99	144
Other cattle.....	23,199	1,159,950.00	18,536	1,000,944.00	415	666
Sheep.....	296	3,256.00	351	4,387.50	3	11
Swine.....	3,904	80,032.00	3,593	80,955.00	103	218
Totals.....	39,373	\$2,577,893.00	35,570	\$2,473,123.50	840	1,339

Number of dogs in county March 1, 1917, 530; March 1, 1918, 654.

Number of sheep killed by dogs, year ending March 1, 1917, 50; March 1, 1918, 4.

Number of sheep killed by wolves, year ending March 1, 1917, 7; March 1, 1918, 3.

Mortality of swine from cholera, year ending March 1, 1917, 2; March 1, 1918, 63.

FARM AND CROP STATISTICS.—MEADE COUNTY.

Table showing acres, product and value of field crops in the county for 1917 and 1918.

Crops.	1917.			1918.		
	Acres.	Product.	Value.	Acres.	Product.	Value.
Winter wheat.....bu.	7,295	29,180	\$62,153.40	28,814	115,256	\$227,054.32
Spring wheat.....bu.						
Corn.....bu.	31,344	62,688	78,360.00	19,301	57,903	85,117.41
Oats.....bu.	18,055			25,712	51,424	41,139.20
Rye.....bu.	402			758	3,790	6,253.50
Barley.....bu.	30,219			13,313	26,626	26,626.00
Emmer ("speltz").....bu.				30	30	25.50
Irish potatoes.....bu.	36	360	576.00	82	1,394	2,230.40
Sweet potatoes.....bu.	1					
Cowpeas.....tons				41	62	1,023.00
Flax.....bu.						
Broom corn.....lbs.	588	176,400	22,932.00	2,285	783,755	78,375.50
Millet.....tons	316	158	1,738.00	527	527	5,797.00
Sugar beets.....tons	1	10	55.00			
Sorghum for syrup.....gals.	10			16		
for seed.....bu.	944	2,832	4,531.20	5,257	52,570	91,997.50
for hay.....tons	12,986	12,986	103,888.00	15,147	18,934	189,340.00
Milo for grain.....bu.	30,061	210,427	294,597.80	28,600	171,600	257,400.00
for stover*.....tons		22,546	112,730.00		21,450	107,250.00
for hay.....tons	365	365	2,737.50	595	744	5,952.00
Kafir for grain.....bu.	43,791	175,164	245,229.60	40,950	286,650	429,975.00
for stover*.....tons		43,791	328,432.50		40,950	286,650.00
for hay.....tons	1,240	1,240	9,920.00	744	930	8,370.00
Feterita for grain.....bu.	17,340	86,700	129,183.00	17,364	138,912	201,422.40
for stover*.....tons		8,670	43,350.00		17,364	86,820.00
for hay.....tons	509	127	1,016.00	269	336	2,688.00
Sudan grass.....tons	743	929	9,290.00	3,141	6,282	75,384.00
Jerusalem corn.....tons	15	15	120.00	8	10	90.00
Alfalfa.....tons	7,996	13,593	258,267.00	6,006	9,009	189,189.00
Timothy.....tons						
Clover.....tons						
Blue grass.....tons						
Sweet clover.....tons	38	†		9	†	
Orchard grass.....tons						
Other tame grasses.....tons	120			60		
Prairie hay.....tons	5,121	5,121	71,694.00	2,371	1,778	28,448.00
Totals.....	209,536		\$1,780,801.00	211,400		\$2,434,617.73

Corn on hand March 1, 1917, 2,720 bushels; March 1, 1918, 3,255 bushels.

Wheat on hand March 1, 1917, 28,782 bushels; March 1, 1918, 5,114 bushels.

Prairie grass for pasture March 1, 1918: Acres fenced, 234,753; acres not fenced, 5,220.

* Forage after harvesting grain. † Product of 1916. ‡ Product of 1917.

SUMMARY.—MEADE COUNTY.

Showing quantity and value of farm products in the county for 1917 and 1918.

Products.	1917.		1918.	
	Quantity.	Value.	Quantity.	Value.
Field crops.....acres	209,536	\$1,780,801.00	211,400	\$2,434,617.73
Animals slaughtered or sold for slaughter.....		271,540.00		236,061.00
Poultry and eggs sold.....		45,885.00		44,324.00
Wool clip.....lbs.	2,640	739.20	1,610	869.40
Cheese.....lbs.				
Butter.....lbs.	71,728	21,518.40	68,611	26,758.29
Condensed milk.....lbs.				
Milk sold.....		32,884.00		58,850.00
Honey and beeswax.....lbs.	525	95.50	24	6.00
Wood marketed.....		278.00		290.00
Totals.....		\$2,153,741.10		\$2,801,776.42

Number of tractors March 1, 1917, 69; March 1, 1918, 66.

Number of cream separators March 1, 1917, 418; March 1, 1918, 500.

Number of silos March 1, 1917, 81; March 1, 1918, 68.

MIAMI COUNTY.

Organized in 1855; area, 375,091 acres; population, 18,592; rank in population, 30; assessed valuation, \$40,039,376; miles of railroad, main track, 97.60; county seat, Paola; population, 3,137.

POPULATION AND VALUATION.—MIAMI COUNTY.

Table showing total population, by townships and cities, for 1917 and 1918, and the assessed valuation of the municipal townships and cities of 1918.

Townships (and cities).	Population.		Assessed valuation of property, 1918.				
	1917.	1918.	Land.	City lots.	Personal.	Railroad, etc.	Total.
The county.....	18,892	18,592	\$19,713,581	\$3,254,690	\$9,333,564	\$7,737,541	\$40,039,376
Marysville tp.....	1,189	1,154	\$2,264,297	\$37,540	\$645,365	\$1,200,664	\$4,147,866
Miami tp.....	804	811	1,239,014	6,685	444,835	71,264	1,761,798
Middle Creek tp.....	1,106	1,002	1,616,220	14,475	477,855	137,260	2,245,810
Mound tp.....	895	638	886,121	19,510	310,814	301,194	1,517,639
Fontana.....	*.....	194	.....	58,055	77,850	26,800	162,705
Osage tp.....	893	658	1,066,690	.....	333,540	353,192	1,753,422
Osawatomie.....	2,700	3,390	.....	1,066,000	377,525	236,027	1,679,552
Osawatomie tp.....	907	912	1,148,742	.....	397,893	1,408,691	2,955,326
Paola.....	3,712	3,137	.....	1,816,435	1,511,580	337,386	3,665,411
Paola tp.....	678	650	1,474,237	.....	624,423	1,162,430	3,261,090
Richland tp.....	1,116	1,120	2,498,306	.....	997,215	183,727	3,679,248
Stanton tp.....	683	733	1,215,020	2,770	807,932	33,765	2,059,487
Sugar Creek tp.....	675	684	1,236,890	.....	354,450	44,944	1,636,284
Ten Mile tp.....	961	947	1,870,391	39,890	536,770	1,276,954	3,724,005
Valley tp.....	892	885	1,229,899	.....	489,322	766,454	2,485,675
Louisburg.....	634	640	.....	193,330	289,275	17,826	500,431
Wea tp.....	1,047	1,037	1,967,754	.....	656,920	178,953	2,803,627

* Not reported separately from township in 1917.

LIVESTOCK.—MIAMI COUNTY.

Table showing number, value and mortality of livestock in the county for 1917 and 1918.

Livestock.	1917.		1918.		Mortality.	
	Number.	Value.	Number.	Value.	1917.	1918.
Horses.....	10,465	\$1,255,800.00	11,156	\$1,238,316.00	169	181
Mules and asses.....	2,557	345,195.00	2,159	302,260.00	15	23
Milk cows.....	9,297	697,275.00	9,589	786,298.00	125	247
Other cattle.....	19,216	960,800.00	19,015	1,026,810.00	312	661
Sheep.....	3,796	41,756.00	5,889	73,612.50	188	204
Swine.....	26,015	533,307.50	30,423	684,517.50	652	756
Totals.....	71,346	\$3,834,133.50	78,231	\$4,111,814.00	1,461	2,072

Number of dogs in county March 1, 1917, 1,311; March 1, 1918, 1,514.

Number of sheep killed by dogs, year ending March 1, 1917, 70; March 1, 1918, 49.

Number of sheep killed by wolves, year ending March 1, 1917, 18; March 1, 1918, 21.

Mortality of swine from cholera, year ending March 1, 1917, 427; March 1, 1918, 363.

FARM AND CROP STATISTICS.—MIAMI COUNTY.

Table showing acres, product and value of field crops in the county for 1917 and 1918.

Crops.	1917.			1918.		
	Acres.	Product.	Value.	Acres.	Product.	Value.
Winter wheat..... bu.	27,468	549,360	\$1,153,656.00	54,404	1,305,696	\$2,702,790.72
Spring wheat..... bu.						
Corn..... bu.	76,026	1,824,624	1,970,593.92	55,982	447,856	685,219.68
Oats..... bu.	37,318	1,530,038	856,821.28	33,803	1,149,302	770,032.34
Rye..... bu.	99	1,782	3,011.58	91	1,456	2,329.60
Barley..... bu.	7	175	175.00			
Emmer ("speltz")..... bu.						
Irish potatoes..... bu.	756	43,092	68,947.20	970	26,190	38,237.40
Sweet potatoes..... bu.	20	1,200	1,740.00	1	70	122.50
Cowpeas..... tons	15	19	304.00	35	53	874.50
Flax..... bu.	779	5,453	14,723.10	129	774	2,515.50
Broom corn..... lbs.	16	5,600	812.00	15	4,500	450.00
Millet..... tons	291	582	5,820.00	110	193	2,123.00
Sugar beets..... tons						
Sorghum for syrup..... gals.	143	9,295	6,506.50	141	8,460	9,306.00
for seed..... bu.	50	900	1,350.00	110	1,100	1,925.00
for hay..... tons	720	2,160	17,280.00	309	773	7,343.50
Milo for grain..... bu.	32	480	600.00	116	1,160	1,798.00
for stover*..... tons		96	480.00		232	1,160.00
for hay..... tons				16	48	336.00
Kafir for grain..... bu.	2,817	42,255	63,382.50	1,769	19,459	31,134.40
for stover*..... tons		7,746	46,476.00		3,980	23,880.00
for hay..... tons	34	136	1,088.00	162	405	3,037.50
Feterita for grain..... bu.	51	918	1,377.00	75	975	1,589.25
for stover*..... tons		127	698.50		225	1,125.00
for hay..... tons	97	291	1,746.00	51	179	1,253.00
Sudan grass..... tons	107	214	1,712.00	32	64	640.00
Jerusalem corn..... tons	6	24	192.00	3	8	60.00
Alfalfa..... tons	3,516	9,845	187,055.00	4,240	8,480	195,040.00
Timothy..... tons	23,231			19,780		
Clover..... tons	8,577			7,117		
Blue grass..... tons	21,670			16,715		
Sweet clover..... tons	34	† 25,265	429,505.00	9	‡ 25,190	554,180.00
Orchard grass..... tons						
Other tame grasses..... tons	3,740			359		
Prairie hay..... tons	8,397	8,397	134,352.00	6,887	5,165	98,135.00
Totals.....	216,017		\$4,970,404.58	203,431		\$5,136,637.89

Corn on hand March 1, 1917, 118,756 bushels; March 1, 1918, 403,755 bushels.

Wheat on hand March 1, 1917, 2,440 bushels; March 1, 1918, 11,165 bushels.

Prairie Grass for pasture March 1, 1918: Acres fenced, 31,778; acres not fenced, 262.

* Forage after harvesting grain. † Product of 1916. ‡ Product of 1917.

SUMMARY.—MIAMI COUNTY.

Showing quantity and value of farm products in the county for 1917 and 1918.

Products.	1917.		1918.	
	Quantity.	Value.	Quantity.	Value.
Field crops..... acres	216,017	\$4,970,404.58	203,431	\$5,136,637.89
Animals slaughtered or sold for slaughter.....		932,892.00		1,378,076.00
Poultry and eggs sold.....		241,915.00		258,692.00
Wool clip..... lbs.	10,916	3,056.48	15,141	8,176.14
Cheese..... lbs.				
Butter..... lbs.	347,381	106,629.30	362,165	144,406.35
Condensed milk..... lbs.				
Milk sold.....		136,604.00		189,972.00
Honey and beeswax..... lbs.	42,037	7,645.66	2,650	663.55
Wood marketed.....		4,093.00		1,873.00
Totals.....		\$6,504,240.02		\$7,118,496.93

Number of cream separators March 1, 1917, 1,035; March 1, 1918, 1,163.

Number of silos March 1, 1917, 123; March 1, 1918, 118.

Number of tractors March 1, 1917, 18; March 1, 1918, 41.

MITCHELL COUNTY.

Organized in 1870; area, 458,577 acres; population, 13,862; rank in population, 49, assessed valuation, \$34,828,705; miles of railroad, main track, 57.23; county seat, Beloit; population, 3,162.

POPULATION AND VALUATION.—MITCHELL COUNTY.

Table showing total population, by townships and cities, for 1917 and 1918, and the assessed valuation of the municipal townships and cities of 1918.

Townships (and cities).	Population.		Assessed valuation of property, 1918.				
	1917.	1918.	Land.	City lots.	Personal.	Railroad, etc.	Total.
The county.....	14,758	13,862	\$21,033,339	\$3,455,180	\$8,401,817	\$1,938,369	\$34,828,705
Asherville tp.	560	560	\$1,281,767	\$18,455	\$366,325	\$186,646	\$1,853,193
Beloit.....	3,943	3,162	2,256,520	1,878,124	1,878,124	220,490	4,355,134
Beloit tp.	700	710	1,658,400	421,550	421,550	312,369	2,392,319
Bloomfield tp.	430	454	1,132,895	323,041	323,041	4,721	1,460,657
Blue Hill tp.	405	397	687,317	224,569	224,569	3,602	915,488
Carr Creek tp.	428	423	1,202,510	203,388	203,388	2,967	1,408,865
Cawker City.....	829	805	377,665	385,322	385,322	42,391	805,378
Cawker tp.	485	477	1,351,315	309,290	309,290	206,721	1,867,326
Center tp.	343	363	990,195	184,225	184,225	3,769	1,178,189
Custer tp.	518	546	693,735	111,670	255,189	65,499	1,126,093
Eureka tp.	304	298	790,835	261,190	261,190	785	1,052,810
Glen Elder.....	644	633	389,145	513,449	513,449	28,923	931,517
Glen Elder tp.	514	487	1,292,785	303,627	303,627	207,140	1,803,552
Hayes tp.	431	452	854,070	211,060	211,060	1,929	1,067,059
Simpson.....	290	304	108,815	190,356	190,356	21,386	320,557
Logan tp.	383	339	1,090,289	203,920	203,920	24,666	1,318,875
Scottsville.....	207	187	75,980	83,133	83,133	26,484	185,597
Lulu tp.	373	375	1,151,030	236,829	236,829	280,133	1,667,992
Tipton.....	238	251	116,930	179,749	179,749	3,332	300,011
Pittsburg tp.	374	352	845,035	218,098	218,098	41,514	1,104,647
Plum Creek tp.	416	422	1,181,015	219,662	219,662	15,512	1,416,189
Round Springs tp.	228	227	581,846	154,555	154,555	1,360	737,761
Salt Creek tp.	265	266	749,440	268,680	268,680	2,165	1,020,285
Solomon Rpd.'s tp.	441	414	1,105,050	223,085	223,085	77,777	1,405,912
Turkey Creek tp.	491	464	1,231,565	325,017	325,017	153,362	1,709,944
Walnut Creek tp.	518	494	1,162,245	258,384	258,384	2,726	1,423,355

LIVESTOCK.—MITCHELL COUNTY.

Table showing number, value and mortality of livestock in the county for 1917 and 1918.

Livestock.	1917.		1918.		Mortality.	
	Number.	Value.	Number.	Value.	1917.	1918.
Horses.....	12,783	\$1,533,960.00	12,804	\$1,421,244.00	178	194
Mules and asses.....	3,146	424,710.00	2,615	366,100.00	12	8
Milk cows.....	5,603	420,225.00	6,776	555,632.00	85	75
Other cattle.....	24,760	1,238,000.00	22,697	1,225,638.00	268	435
Sheep.....	2,147	23,617.00	4,013	50,162.50	3	.....
Swine.....	15,033	308,176.50	14,265	320,962.50	196	630
Totals.....	63,472	\$3,948,688.50	63,170	\$3,939,739.00	742	1,342

Number of dogs in county March 1, 1917, 1,200; March 1, 1918, 1,659.

Number of sheep killed by dogs, year ending March 1, 1917, 4; March 1, 1918, 8.

Mortality of swine from cholera, year ending March 1, 1917, 110; March 1, 1918, 474.

FARM AND CROP STATISTICS.—MITCHELL COUNTY.

Table showing acres, product and value of field crops in the county for 1917 and 1918.

Crops.	1917.			1918.		
	Acres.	Product.	Value.	Acres.	Product.	Value.
Winter wheat.....bu.	25,527	178,689	\$360,951.78	58,667	528,003	\$1,029,605.85
Spring wheat.....bu.				25	200	386.00
Corn.....bu.	174,454	1,221,178	1,343,295.80	127,669	255,338	372,793.48
Oats.....bu.	32,352	549,984	357,489.60	33,941	678,820	488,750.40
Rye.....bu.	1,072	8,576	15,008.00	1,996	23,952	38,323.20
Barley.....bu.	5,104	86,768	86,768.00	20,738	435,498	435,498.00
Emmer ("speltz").....bu.				36	648	466.56
Irish potatoes.....bu.	815	23,635	35,452.50	757	18,168	27,252.00
Sweet potatoes.....bu.						
Cowpeas.....tons						
Flax.....bu.						
Broom corn.....lbs.						
Millet.....tons	753	1,130	12,430.00	689	689	8,265.00
Sugar beets.....tons						
Sorghum for syrup.....gals.	20	600	420.00	94	2,820	3,102.00
for seed.....bu.	476	3,332	5,664.40	1,234	9,872	19,744.00
for hay.....tons	10,557	18,475	166,275.00	7,326	10,989	87,912.00
Milo for grain.....bu.	62	62	86.80	1,389	12,501	20,001.60
for stover*.....tons		31	155.00		2,431	14,586.00
for hay.....tons	2	3	21.00	42	84	630.00
Kafir for grain.....bu.	5,880	23,520	35,280.00	7,817	54,719	87,550.40
for stover*.....tons		8,820	66,150.00		15,634	93,804.00
for hay.....tons	539	944	8,024.00	466	932	7,456.00
Feterita for grain.....bu.	1,560	18,720	32,385.60	1,417	12,753	20,404.80
for stover*.....tons		2,730	17,745.00		2,480	12,400.00
for hay.....tons	29	87	696.00	126	221	1,547.00
Sudan grass.....tons	127	318	3,021.00	785	1,570	15,700.00
Jerusalem corn.....tons	4	7	59.50	4	8	64.00
Alfalfa.....tons	17,895	39,369	748,011.00	19,775	29,663	622,923.00
Timothy.....tons						
Clover.....tons						
Blue grass.....tons	1	†		12	†	
Sweet clover.....tons	6					
Orchard grass.....tons						
Other tame grasses.....tons				20		
Prairie hay.....tons	11,257	8,442	126,630.00	3,482	2,612	39,180.00
Totals.....	288,492		\$3,422,019.98	288,507		\$3,448,348.29

Corn on hand March 1, 1917, 233,421 bushels; March 1, 1918, 121,671 bushels.

Wheat on hand March 1, 1917, 116,326 bushels; March 1, 1918, 39,564 bushels.

Prairie grass for pasture March 1, 1918: Acres fenced, 110,159; acres not fenced, 370.

* Forage after harvesting grain. † Product of 1916. ‡ Product of 1917.

SUMMARY.—MITCHELL COUNTY.

Showing quantity and value of farm products in the county for 1917 and 1918.

Products.	1917.		1918.	
	Quantity.	Value.	Quantity.	Value.
Field crops.....acres	288,492	\$3,422,019.98	288,507	\$3,448,348.29
Animals slaughtered or sold for slaughter.....		891,477.00		904,514.00
Poultry and eggs sold.....		207,698.00		195,229.00
Wool clip.....lbs.	32	8.96	92	49.68
Cheese.....lbs.			35	6.30
Butter.....lbs.	239,004	71,701.20	230,980	90,082.20
Condensed milk.....lbs.				
Milk sold.....		50,703.00		97,828.00
Honey and beeswax.....lbs.	1,920	345.60	1,088	275.75
Wood marketed.....		265.00		247.00
Totals.....		\$4,644,218.74		\$4,736,580.22

Number of cream separators March 1, 1917, 1,018; March 1, 1918, 975.

Number of silos March 1, 1917, 139; March 1, 1918, 135.

Number of tractors March 1, 1917, 30; March 1, 1918, 46.

MONTGOMERY COUNTY.

Organized in 1869; area, 415,186 acres; population, 48,052; rank in population, 5; assessed valuation, \$75,083,025; miles of railroad, main track, 57.23; county seat, Independence; population, 11,505.

POPULATION AND VALUATION.—MONTGOMERY COUNTY.

Table showing total population, by townships and cities, for 1917 and 1918, and the assessed valuation of the municipal townships and cities of 1918.

Townships (and cities).	Population.		Assessed valuation of property, 1918.				
	1917.	1918.	Land.	City lots.	Personal.	Railroad, etc.	Total.
The county	49,717	48,052	\$16,993,139	\$16,735,010	\$28,629,495	\$12,725,381	\$75,083,025
Caney	3,971	2,747		\$1,104,735	\$644,945	\$63,104	\$1,812,784
Havana	265	239		80,960	79,477	44,392	204,829
Caney tp	2,082	1,556	\$1,262,161	89,349	2,553,712	1,905,411	5,785,053
Cherokee tp	983	1,014	1,095,283	75,650	508,147	509,998	2,189,078
Cherryvale	4,779	4,684		1,752,040	881,434	218,987	2,852,461
Cherry tp	921	5,700	1,205,430	49,571	1,339,577	1,085,285	3,679,863
Drum Creek tp	847	720	899,137	9,140	536,512	489,163	1,933,952
Dearing	339	279		53,555	67,187	21,062	141,804
Fawn Creek tp	1,735	1,307	1,503,855	20,220	1,639,863	990,737	4,154,675
Independence	10,941	11,505		6,872,615	9,897,117	592,551	17,362,283
Independence tp	1,844	1,824	2,668,741	162,010	1,870,912	1,969,870	6,671,533
Liberty	306	277		76,503	140,715	11,201	228,419
Liberty tp	759	804	952,494	5,722	517,621	289,306	1,765,143
Elk City	604	565		187,345	257,744	15,026	460,115
Louisburg tp	1,157	1,159	1,322,889	3,775	366,831	686,934	2,380,429
Coffeyville	13,315	13,465		5,868,265	3,767,124	722,831	10,358,220
Parker tp	1,674	1,723	3,132,916	189,180	1,441,511	502,719	4,683,061
Rutland tp	980	894	1,056,606		1,121,000	672,981	2,830,387
Sycamore tp	1,320	1,287	1,225,193	27,565	544,803	1,398,319	3,211,633
West Cherry tp	504	497	668,434		342,955	512,186	1,523,575
Tyro*	391	481		106,810	110,308	23,318	240,436

* In Caney and Fawn Creek townships.

LIVESTOCK.—MONTGOMERY COUNTY.

Table showing number, value and mortality of livestock in the county for 1917 and 1918.

Livestock.	1917.		1918.		Mortality.	
	Number.	Value.	Number.	Value.	1917.	1918.
Horses	12,258	\$1,470,960.00	11,764	\$1,305,804.00	213	232
Mules and asses	3,377	455,895.00	2,814	393,960.00	25	15
Milk cows	8,514	638,550.00	8,715	714,630.00	198	205
Other cattle	16,378	818,900.00	16,432	887,328.00	445	573
Sheep	1,396	15,356.00	1,155	14,437.50	118	48
Swine	11,619	238,189.50	11,672	262,620.00	334	1,453
Totals	53,542	\$3,637,850.50	52,552	\$3,578,779.50	1,333	2,526

Number of dogs in county March 1, 1917, 1,496; March 1, 1918, 2,495.

Number of sheep killed by dogs, year ending March 1, 1917, 11; March 1, 1918, 21.

Number of sheep killed by wolves, year ending March 1, 1917, 48; March 1, 1918, 38.

Mortality of swine from cholera, year ending March 1, 1917, 99; March 1, 1918, 1,132.

FARM AND CROP STATISTICS.—MONTGOMERY COUNTY.

Table showing acres, product and value of field crops in the county for 1917 and 1918.

Crops.	1917.			1918.		
	Acres.	Product.	Value.	Acres.	Product.	Value.
Winter wheat.....bu.	43,493	739,381	\$1,500,943.43	67,600	1,419,600	\$2,867,592.00
Spring wheat.....bu.						
Corn.....bu.	39,630	277,410	341,214.30	24,527	73,581	110,371.50
Oats.....bu.	33,920	1,153,280	715,033.60	43,026	1,290,780	903,546.00
Rye.....bu.	351	4,212	7,244.64	849	11,886	19,611.90
Barley.....bu.	13	221	223.21	38	760	798.00
Emmer ("speltz").....bu.				9	243	170.10
Irish potatoes.....bu.	424	31,376	43,926.40	640	26,880	40,320.00
Sweet potatoes.....bu.	21	1,785	2,499.00	64	3,200	6,240.00
Cowpeas.....tons	74	92	1,472.00	135	203	3,349.50
Flax.....bu.	265	2,120	5,724.00	419	2,095	6,808.75
Broom corn.....lbs.				16	4,800	480.00
Millet.....tons	317	634	6,340.00	331	497	5,467.00
Sugar beets.....tons	1	10	55.00			
Sorghum for syrup.....gals.	93	6,510	4,557.00	287	11,480	12,628.00
for seed.....bu.	110	1,320	2,112.00	405	3,645	6,561.00
for hay.....tons	1,630	5,298	42,384.00	2,555	5,110	45,990.00
Milo for grain.....bu.	112	1,456	2,111.20	234	1,872	2,901.60
for stover*.....tons		224	672.00		351	1,404.00
for hay.....tons				5	8	48.00
Kafir for grain.....bu.	14,013	196,182	264,845.70	15,085	90,510	135,765.00
for stover*.....tons		35,032	175,160.00		30,170	181,020.00
for hay.....tons	750	2,250	14,625.00	1,355	2,710	17,615.00
Feterita for grain.....bu.	421	4,631	5,881.37	187	2,057	3,085.50
for stover*.....tons		842	2,947.00		327	1,308.00
for hay.....tons	163	326	1,956.00	124	217	1,302.00
Sudan grass.....tons	322	1,208	10,872.00	273	614	6,754.00
Jerusalem corn.....tons	80	240	1,560.00	54	108	702.00
Alfalfa.....tons	10,062	32,198	643,960.00	13,890	34,725	833,400.00
Timothy.....tons	296			251		
Clover.....tons	345			290		
Blue grass.....tons	421			462		
Sweet clover.....tons	339	† 1,372	22,638.00	109	‡ 1,800	39,600.00
Orchard grass.....tons	4			2		
Other tame grasses.....tons	73			137		
Prairie hay.....tons	15,897	15,897	238,455.00	14,305	7,153	128,754.00
Totals.....	163,640		\$4,059,411.85	187,664		\$5,383,592.85

Corn on hand March 1, 1917, 22,478 bushels; March 1, 1918, 46,730 bushels.

Wheat on hand March 1, 1917, 16,211 bushels; March 1, 1918, 34,205 bushels.

Prairie grass for pasture March 1, 1918: Acres fenced, 72,082; acres not fenced, 813.

* Forage after harvesting grain. † Product of 1916. ‡ Product of 1917.

SUMMARY.—MONTGOMERY COUNTY.

Showing quantity and value of farm products in the county for 1917 and 1918.

Products.	1917.		1918.	
	Quantity.	Value.	Quantity.	Value.
Field crops.....acres	163,640	\$4,059,411.85	187,664	\$5,383,592.85
Animals slaughtered or sold for slaughter.....		424,579.00		518,385.00
Poultry and eggs sold.....		130,848.00		148,288.00
Wool clip.....lbs.	1,759	492.52	4,471	2,414.34
Cheese.....lbs.			246	44.28
Butter.....lbs.	649,846	200,904.18	523,901	208,349.10
Condensed milk.....lbs.				
Milk sold.....		99,912.00		133,998.00
Honey and beeswax.....lbs.	9,106	1,664.08	4,334	1,084.95
Wood marketed.....		334.00		1,916.00
Totals.....		\$4,918,145.63		\$6,398,072.52

Number of cream separators March 1, 1917, 1,078; March 1, 1918, 1,168.

Number of silos March 1, 1917, 80; March 1, 1918, 97.

Number of tractors March 1, 1917, 41; March 1, 1918, 61.

MORRIS COUNTY.

Organized in 1858; area, 449,510 acres; population, 12,163; rank in population, 56; assessed valuation, \$27,593,463; miles of railroad, main track, 106.88; county seat, Council Grove; population, 2,931.

POPULATION AND VALUATION.—MORRIS COUNTY.

Table showing total population, by townships and cities, for 1917 and 1918, and the assessed valuation of the municipal townships and cities of 1918.

Townships (and cities).	Population.		Assessed valuation of property, 1918.				
	1917.	1918.	Land.	City lots.	Personal.	Railroad, etc.	Total.
The county.....	11,676	12,163	\$14,845,640	\$1,764,095	\$6,567,405	\$4,416,323	\$27,593,463
Burdick tp.....	498	509	\$887,840	\$45,745	\$533,415	\$254,183	\$1,721,183
Clark's Creek tp.....	358	355	663,860	23,525	230,930	365,545	1,283,860
Council Grove.....	2,650	2,931	.....	1,122,540	786,645	159,014	2,068,199
Council Grove tp.....	438	432	785,450	.....	309,760	342,750	1,437,960
Diamond Valley tp.....	225	213	659,080	1,130	173,520	307,789	1,141,519
Wilsey.....	247	330	.....	92,610	149,395	36,072	278,077
Elm Creek tp.....	888	841	1,736,125	2,605	461,325	352,717	2,552,772
Four Mile tp.....	254	233	703,735	.....	248,440	265	952,440
Garfield tp.....	448	496	784,220	640	410,240	407,582	1,602,682
Grandview tp.....	800	806	1,632,240	25,855	447,105	486,559	2,591,759
Highland tp.....	370	394	809,060	.....	247,515	259,575	1,316,150
Neosho tp.....	596	563	1,042,615	4,430	316,970	138,582	1,502,597
Dwight.....	233	223	.....	104,020	157,490	54,247	315,757
Ohio tp.....	525	579	941,580	.....	342,900	335,768	1,620,248
Overland tp.....	304	302	667,100	.....	181,985	.....	849,085
Parkerville.....	140	130	.....	38,245	32,705	18,417	89,367
Parker tp.....	584	654	1,202,315	.....	340,355	364,329	1,906,999
White City.....	554	576	.....	216,030	293,920	89,922	599,872
Rolling Prairie tp.....	429	500	719,325	8,055	257,625	322,271	1,307,276
Dunlap.....	262	289	.....	78,665	114,495	19,543	212,703
Valley tp.....	393	350	849,705	.....	272,070	100,870	1,222,645
Warren tp.....	480	457	761,390	.....	258,600	323	1,020,313

LIVESTOCK.—MORRIS COUNTY.

Table showing number, value and mortality of livestock in the county for 1917 and 1918.

Livestock.	1917.		1918.		Mortality.	
	Number.	Value.	Number.	Value.	1917.	1918.
Horses.....	10,281	\$1,233,720.00	9,638	\$1,069,818.00	172	132
Mules and asses.....	2,144	289,440.00	1,666	233,240.00	10	12
Milk cows.....	5,159	386,925.00	7,345	602,290.00	119	125
Other cattle.....	33,172	1,658,600.00	33,816	1,826,064.00	669	735
Sheep.....	1,174	12,914.00	1,473	18,412.50	36	48
Swine.....	20,264	415,412.00	22,969	516,802.50	865	1,860
Totals.....	72,194	\$3,997,011.00	76,907	\$4,266,627.00	1,871	2,912

Number of dogs in county March 1, 1917, 1,140; March 1, 1918, 1,388.

Number of sheep killed by dogs, year ending March 1, 1918, 4.

Number of sheep killed by wolves, year ending March 1, 1917, 6; March 1, 1918, 3.

Mortality of swine from cholera, year ending March 1, 1917, 402; March 1, 1918, 1,267.

FARM AND CROP STATISTICS.—MORRIS COUNTY.

Table showing acres, product and value of field crops in the county for 1917 and 1918.

Crops.	1917.			1918.		
	Acres.	Product.	Value.	Acres.	Product.	Value.
Winter wheat.....bu.	15,991	287,838	\$621,730.08	30,925	742,200	\$1,506,666.00
Spring wheat.....bu.						
Corn.....bu.	78,696	1,810,008	1,936,708.56	66,182	397,092	595,638.00
Oats.....bu.	16,500	495,000	316,800.00	19,617	568,893	403,914.03
Rye.....bu.	709	14,889	24,566.85	649	11,033	17,652.80
Barley.....bu.	72	1,944	1,944.00	24	600	642.00
Emmer ("speltz").....bu.						
Irish potatoes.....bu.	686	32,928	51,038.40	753	27,108	41,746.32
Sweet potatoes.....bu.	4	240	384.00	7	350	700.00
Cowpeas.....tons	10	12	192.00	5	8	132.00
Flax.....bu.	12	72	194.40			
Broom corn.....lbs.	10	3,000	420.00	5	1,500	150.00
Millet.....tons	2,354	4,708	40,018.00	2,379	4,163	45,793.00
Sugar beets.....tons						
Sorghum for syrup.....gals.	120	7,200	5,040.00	46	2,760	3,036.00
for seed.....bu.	1,827	16,443	26,637.66	3,547	42,564	80,445.96
for hay.....tons	2,191	6,573	32,865.00	1,793	6,276	50,208.00
Milo for grain.....bu.	150	2,700	3,510.00	341	3,410	5,456.00
for stover*.....tons		300	900.00		597	2,985.00
for hay.....tons				86	172	1,204.00
Kafir for grain.....bu.	13,622	81,732	109,520.88	7,241	57,928	92,684.80
for stover*.....tons		47,677	190,708.00		16,292	97,752.00
for hay.....tons	97	315	1,890.00	866	2,382	17,865.00
Feterita for grain.....bu.	217	2,821	4,231.00	467	6,588	10,003.14
for stover*.....tons		651	2,604.00		1,284	6,420.00
for hay.....tons	76	228	1,596.00	237	711	4,977.00
Sudan grass.....tons	71	142	1,136.00	306	689	6,890.00
Jerusalem corn.....tons	2	7	42.00			
Alfalfa.....tons	21,810	63,249	1,138,482.00	23,359	46,718	981,078.00
Timothy.....tons	102			58		
Clover.....tons	31			80		
Blue grass.....tons	141			262		
Sweet clover.....tons	872	† 1,000	15,000.00	1,231	‡ 1,900	38,000.00
Orchard grass.....tons	21			33		
Other tame grasses.....tons	42			49		
Prairie hay.....tons	14,692	18,365	257,110.00	16,945	8,473	135,568.00
Totals.....	171,128		\$4,785,269.33	177,493		\$4,147,607.05

Corn on hand March 1, 1917, 70,044 bushels; March 1, 1918, 236,990 bushels.

Wheat on hand March 1, 1917, 1,642 bushels; March 1, 1918, 9,375 bushels.

Prairie grass for pasture March 1, 1918: Acres fenced, 180,057; acres not fenced, 5,655.

* Forage after harvesting grain. † Product of 1916. ‡ Product of 1917.

SUMMARY.—MORRIS COUNTY.

Showing quantity and value of farm products in the county for 1917 and 1918.

Products.	1917.		1918.	
	Quantity.	Value.	Quantity.	Value.
Field crops.....acres	171,128	\$4,785,269.33	177,493	\$4,147,607.05
Animals slaughtered or sold for slaughter.....		1,843,647.00		3,084,504.00
Poultry and eggs sold.....		146,411.00		155,176.00
Wool clip.....lbs.	1,915	536.20	3,838	2,072.52
Cheese.....lbs.	300	51.00	112	20.16
Butter.....lbs.	956,555	310,306.50	1,178,301	490,347.39
Condensed milk.....lbs.				
Milk sold.....		111,145.00		192,289.00
Honey and beeswax.....lbs.	23,723	4,308.74	8,401	2,103.75
Wood marketed.....		1,227.00		425.00
Totals.....		\$7,202,901.77		\$8,074,544.87

Number of cream separators March 1, 1917, 787; March 1, 1918, 940.

Number of silos March 1, 1917, 121; March 1, 1918, 137.

Number of tractors March 1, 1917, 37; March 1, 1918, 34.

MORTON COUNTY.

Organized in 1886; area, 465,311 acres; population, 2,517; rank in population, 98; assessed valuation, \$5,147,903; miles of railroad, main track, 21.95; county seat, Richfield.

POPULATION AND VALUATION.—MORTON COUNTY.

Table showing total population, by townships and cities, for 1917 and 1918, and the assessed valuation of the municipal townships and cities of 1918.

Townships (and cities).	Population.		Assessed valuation of property, 1918.				
	1917.	1918.	Land.	City lots.	Personal.	Railroad, etc.	Total.
The county	2,497	2,517	\$2,893,334	\$422,752	\$1,385,751	\$446,066	\$5,147,903
Cimarron tp.....	1,091	911	\$1,115,011	\$49,505	\$373,551	\$301,432	\$1,839,499
Richfield tp.....	281	261	757,378	4,995	300,307	.....	1,062,680
Elkhart.....	479	933	.....	361,297	.....	3,710	365,007
Taloga tp.....	454	1,186	574,065	6,955	613,661	140,924	1,335,605
Westola tp.....	192	159	446,880	.....	98,232	.....	545,112

* Not reported separately from township in 1918.

LIVESTOCK.—MORTON COUNTY.

Table showing number, value and mortality of livestock in the county for 1917 and 1918.

Livestock.	1917.		1918.		Mortality.	
	Number.	Value.	Number.	Value.	1917.	1918.
Horses.....	3,165	\$379,800.00	3,346	\$371,406.00	.....	82
Mules and asses.....	715	96,525.00	806	112,840.00	.....	7
Milk cows.....	700	52,500.00	715	58,630.00	.....	.....
Other cattle.....	11,585	579,250.00	12,256	661,824.00	.....	171
Sheep.....	24	264.00	265	3,312.50	.....	.....
Swine.....	673	13,796.50	788	17,730.00	.....	4
Totals.....	16,862	\$1,122,135.50	18,176	\$1,225,742.50	.....	264

Number of dogs in county March 1, 1917, 247; March 1, 1918, 261.

FARM AND CROP STATISTICS.—MORTON COUNTY.

Table showing acres, product and value of field crops in the county for 1917 and 1918.

Crops.	1917.			1918.		
	Acres.	Product.	Value.	Acres.	Product.	Value.
Winter wheat.....bu.	1,021	5,105	\$10,720.50	1,790	12,530	\$24,684.10
Spring wheat.....bu.						
Corn.....bu.	3,680	11,040	14,904.00	2,682	37,548	54,444.60
Oats.....bu.	244			26	312	249.60
Rye.....bu.	336	1,344	2,150.40	764	6,876	11,345.40
Barley.....bu.	2,318	16,226	16,226.00	335	4,020	3,819.00
Emmer ("speltz").....bu.						
Irish potatoes.....bu.	5	50	87.50			
Sweet potatoes.....bu.						
Cowpeas.....tons	18	22	352.00			
Flax.....bu.						
Broom corn.....lbs.	6,259	1,564,750	203,417.50	3,631	1,332,577	113,269.05
Millet.....tons						
Sugar beets.....tons						
Sorghum for syrup.....gals.						
for seed.....bu.	26	234	339.30			
for hay.....tons	3,451	5,177	36,239.00	4,324	10,810	108,100.00
Milo for grain.....bu.	14,513	159,643	233,078.78	18,030	342,570	496,726.50
for stover*.....tons		14,513	58,052.00		45,075	225,375.00
for hay.....tons						
Kafir for grain.....tons	7,525	52,675	76,905.50	8,510	144,670	217,005.00
for stover*.....tons		7,525	37,625.00		17,020	119,140.00
for hay.....tons	30	60	510.00			
Peterita for grain.....bu.	983	9,830	13,958.60	570	8,550	11,970.00
for stover*.....tons		738	3,690.00		1,568	8,624.00
for hay.....tons				63	173	1,297.50
Sudan grass.....tons	353	883	8,830.00	285	570	5,985.00
Jerusalem corn.....tons						
Alfalfa.....tons	50	75	1,350.00	50	100	2,100.00
Timothy.....tons						
Clover.....tons						
Blue grass.....tons						
Sweet Clover.....tons						
Orchard grass.....tons						
Other tame grasses.....tons						
Prairie hay.....tons						
Totals.....	40,812		\$718,436.08	41,060		\$1,404,134.75

* Forage after harvesting grain. † Product of 1916. ‡ Product of 1917.

SUMMARY.—MORTON COUNTY.

Showing quantity and value of farm products in the county for 1917 and 1918.

Products.	1917.		1918.	
	Quantity.	Value.	Quantity.	Value.
Field crops.....acres	40,812	\$718,436.08	41,060	\$1,404,134.75
Animals slaughtered or sold for slaughter.....		40,855.00		94,457.00
Poultry and eggs sold.....		5,918.00		7,252.00
Wool clip.....lbs.				
Cheese.....lbs.				
Butter.....lbs.	16,607	4,982.10	24,156	9,420.84
Condensed milk.....lbs.				
Milk sold.....		3,439.00		12,270.00
Honey and beeswax.....lbs.				
Wood marketed.....				
Totals.....		\$773,630.18		\$1,527,534.59

Number of cream separators March 1, 1917, 99; March 1, 1918, 108.

Number of silos March 1, 1917, 8; March 1, 1918, 8.

Number of tractors March 1, 1917, 8; March 1, 1918, 21.

NEMAHA COUNTY.

Organized in 1855; area, 459,707 acres; population, 18,413; rank in population, 31; assessed valuation, \$49,753,106; miles of railroad, main track, 93.99; county seat, Seneca; population, 1,915.

POPULATION AND VALUATION.—NEMAHA COUNTY.

Table showing total population, by townships and cities, for 1917 and 1918, and the assessed valuation of the municipal townships and cities of 1918.

Townships (and cities).	Population.		Assessed valuation of property, 1918.				
	1917.	1918.	Land.	City lots.	Personal.	Railroad, etc.	Total.
The county.....	18,810	18,413	\$30,041,499	\$2,986,090	\$13,728,054	\$2,997,463	\$49,753,106
Adams tp.....	577	645	\$1,472,793	\$3,930	\$394,310	\$16,796	\$1,887,829
Berwick tp.....	704	724	1,845,813	3,910	678,350	171,719	2,699,792
Capioma tp.....	737	741	1,383,169	7,090	576,200	4,543	1,971,002
Center tp.....	599	603	1,681,949		476,310	18,995	2,177,254
Clear Creek tp.....	515	506	1,157,105		287,440	1,115	1,445,660
Oneida.....	278	244		67,340	160,550	19,752	247,642
Gilman tp.....	553	831	1,678,533		477,710	213,180	2,369,423
Granada tp.....	667	624	1,218,494		445,890	1,791	1,666,175
Goff.....	385	386		164,510	195,100	27,326	386,936
Harrison tp.....	775	706	1,254,410	20,590	427,590	324,700	2,027,290
Centralia.....	545	537		259,300	500,070	26,637	786,007
Home tp.....	553	531	1,567,670		391,730	215,284	2,174,684
Corning.....	369	380		158,280	241,550	23,279	423,109
Illinois tp.....	654	650	1,412,704		405,920	299,316	2,117,940
Marion tp.....	732	745	1,823,848	54,480	823,440	242,958	2,944,726
Mitchell tp.....	664	698	1,672,280		439,120	78,101	2,189,501
Nemaha tp.....	446	452	1,455,417		493,560	2,532	1,951,509
Neuchatel tp.....	471	514	1,060,609		311,550	1,584	1,373,743
Red Vermillion tp.....	556	497	1,215,525	120	291,170	91	1,506,906
Reilly tp.....	536	544	1,348,371		363,330	68,076	1,779,777
Seneca.....	2,027	1,915		888,770	971,370	107,511	1,967,651
Richmond tp.....	834	812	1,856,940	11,020	944,310	216,393	3,028,663
Sabatha.....	1,904	1,871		928,210	1,199,370	101,110	2,228,690
Rock Creek tp.....	727	719	1,820,278		641,124	259,435	2,707,837
Bern.....	273	267		103,290	186,760	27,688	3,177,738
Washington tp.....	669	565	1,717,560		566,100	227,562	2,511,222
Wetmore.....	515	514		301,320	451,660	36,119	789,099
Wetmore tp.....	545	550	1,398,031	13,930	386,470	263,870	2,062,301

LIVESTOCK.—NEMAHA COUNTY.

Table showing number, value and mortality of livestock in the county for 1917 and 1918.

Livestock.	1917.		1918.		Mortality.	
	Number.	Value.	Number.	Value.	1917.	1918.
Horses.....	14,343	\$1,721,160.00	14,332	\$1,590,852.00	209	245
Mules and asses.....	2,805	378,675.00	2,262	316,680.00	22	20
Milk cows.....	10,921	819,075.00	11,986	982,852.00	106	244
Other cattle.....	38,291	1,914,550.00	30,944	1,670,976.00	524	1,134
Sheep.....	6,015	66,165.00	7,574	94,675.00	128	237
Swine.....	41,784	856,572.00	50,946	1,146,285.00	1,687	5,738
Totals.....	114,159	\$5,756,197.00	118,044	\$5,802,320.00	2,676	7,618

Number of dogs in county March 1, 1917, 1,880; March 1, 1918, 2,155.

Number of sheep killed by dogs, year ending March 1, 1917, 15; March 1, 1918, 67.

Number of sheep killed by wolves, year ending March 1, 1918, 39.

Mortality of swine from cholera, year ending March 1, 1917, 972; March 1, 1918, 4,435.

FARM AND CROP STATISTICS.—NEMAHA COUNTY.

Table showing acres, product and value of field crops in the county for 1917 and 1918.

Crops.	1917.			1918.		
	Acres.	Product.	Value.	Acres.	Product.	Value.
Winter wheat.....bu.	5,877	94,032	\$189,944.64	36,002	540,030	\$1,101,661.20
Spring wheat.....bu.	18	252	493.92	111	1,443	2,900.43
Corn.....bu.	156,544	3,913,600	4,539,776.00	134,514	2,152,224	2,970,069.12
Oats.....bu.	45,388	1,724,744	1,034,846.40	42,710	640,650	422,829.00
Rye.....bu.	415	6,640	11,088.80	1,057	15,855	26,160.75
Barley.....bu.	146	4,380	4,380.00	296	5,920	6,216.00
Emmer ("speltz").....bu.				17	221	156.91
Irish potatoes.....bu.	1,330	87,780	123,769.80	1,354	41,974	62,961.00
Sweet potatoes.....bu.	5	350	525.00			
Cowpeas.....tons						
Flax.....bu.	20	120	324.00			
Broom corn.....lbs.						
Millet.....tons	3,735	7,470	67,230.00	5,000	7,500	97,500.00
Sugar beets.....tons						
Sorghum for syrup.....gals.	50	3,500	2,450.00	72	4,680	5,148.00
for seed.....bu.	67	469	656.60	154	1,848	3,418.80
for hay.....tons	1,128	3,948	31,584.00	1,000	2,250	22,500.00
Milo for grain.....bu.	8	120	168.00	38	570	883.50
for stover*.....tons		16	64.00		76	456.00
for hay.....tons				10	20	160.00
Kafir for grain.....bu.	1,218	1,218	1,327.00	1,369	20,535	32,856.00
for stover*.....tons		3,654	18,270.00		4,107	32,856.00
for hay.....tons	357	1,428	9,996.00	161	483	4,830.00
Feterita for grain.....bu.	67	1,608	2,090.40	27	405	627.75
for stover*.....tons		268	1,608.00		68	408.00
for hay.....tons	20	60	420.00	41	123	984.00
Sudan grass.....tons	46	184	2,208.00	261	653	7,836.00
Jerusalem corn.....tons	13	52	364.00	10	30	300.00
Alfalfa.....tons	24,412	70,795	1,415,900.00	25,950	38,925	973,125.00
Timothy.....tons	14,474			13,266		
Clover.....lbs.	4,152			4,190		
Blue grass.....tons	14,586			19,229		
Sweet clover.....tons	217	† 37,118	556,770.00	391	‡ 20,184	444,048.00
Orchard grass.....tons	66			14		
Other tame grasses.....tons	858			2,787		
Prairie hay.....tons	13,522	13,522	202,830.00	12,583	9,437	188,740.00
Totals.....	288,739		\$8,219,584.56	302,614		\$6,409,631.46

Corn on hand March 1, 1917, 864,881 bushels; March 1, 1918, 1,300,329 bushels.

Wheat on hand March 1, 1917, 20,694 bushels; March 1, 1918, 8,954 bushels.

Prairie grass for pasture March 1, 1918: Acres fenced, 74,748; acres not fenced, 928.

* Forage after harvesting grain. † Product of 1916. ‡ Product of 1917.

SUMMARY.—NEMAHA COUNTY.

Showing quantity and value of farm products in the county for 1917 and 1918.

Products.	1917.		1918.	
	Quantity.	Value.	Quantity.	Value.
Field crops.....acres	288,739	\$8,219,584.56	302,614	\$6,409,631.46
Animals slaughtered or sold for slaughter.....		1,974,640.00		3,371,527.00
Poultry and eggs sold.....		302,448.00		348,119.00
Wool clip.....lbs.	9,653	2,702.84	21,744	11,741.76
Cheese.....lbs.	3,345	568.65	580	104.40
Butter.....lbs.	286,020	85,806.00	260,518	101,602.02
Condensed milk.....lbs.				
Milk sold.....		199,932.00		284,679.00
Honey and beeswax.....lbs.	43,438	7,871.64	10,175	2,551.70
Wood marketed.....		2,853.00		4,896.00
Totals.....		\$10,796,411.69		\$10,534,852.34

Number of cream separators March 1, 1917, 1,302; March 1, 1918, 1,522.

Number of silos March 1, 1917, 85; March 1, 1918, 136.

Number of tractors March 1, 1917, 21; March 1, 1918, 30.

NEOSHO COUNTY.

Organized in 1864; area, 367,023 acres; population, 23,842; rank in population, 19; assessed valuation, \$37,492,749; miles of railroad, main track, 121.94; county seat, Erie; population, 1,147.

POPULATION AND VALUATION.—NEOSHO COUNTY.

Table showing total population, by townships and cities, for 1917 and 1918, and the assessed valuation of the municipal townships and cities of 1918.

Townships (and cities).	Population.		Assessed valuation of property, 1918.				
	1917.	1918.	Land.	City lots.	Personal.	Railroad, etc.	Total.
The county.....	23,308	23,842	\$14,504,310	\$5,882,065	\$9,459,010	\$7,647,364	\$37,492,749
Big Creek tp.....	875	814	\$1,071,770	.....	\$563,930	\$76,969	\$1,712,669
Earlton.....	145	96	.....	\$47,085	57,545	28,239	132,869
Canville tp.....	549	641	1,155,570	.....	375,910	732,377	2,263,857
Galesburg.....	172	161	.....	73,920	134,435	11,155	219,510
Centerville tp.....	689	680	1,046,745	.....	325,045	316,097	1,687,887
Thayer.....	432	432	.....	186,845	256,710	47,157	490,712
Chetopa tp.....	840	848	1,100,670	.....	331,770	399,886	1,847,211
Erie.....	1,174	1,147	.....	554,560	497,805	71,100	1,123,465
Erie tp.....	931	964	1,260,870	.....	654,615	634,881	2,574,301
Stark.....	180	171	.....	51,180	122,310	19,168	192,658
Grant tp.....	801	875	1,115,200	22,740	414,390	281,281	1,833,611
Ladore tp.....	.....	847	1,230,260	.....	251,280	640,597	2,122,087
Lincoln tp.....	.....	875	1,050,690	21,210	303,040	165,858	1,540,798
St. Paul.....	842	816	.....	191,165	145,420	52,367	388,952
Mission tp.....	743	745	1,074,190	.....	295,405	326,348	1,695,943
Shiloh tp.....	.....	773	1,089,585	20,055	320,635	421,554	1,851,829
Chanute.....	10,185	10,400	.....	4,590,305	2,949,880	480,280	8,020,465
Tioga tp.....	1,387	1,609	2,021,035	84,180	1,009,985	2,098,923	5,214,123
Walnut Grove tp.....	894	948	1,287,725	.....	448,950	843,127	2,579,802

LIVESTOCK.—NEOSHO COUNTY.

Table showing number, value and mortality of livestock in the county for 1917 and 1918.

Livestock.	1917.		1918.		Mortality.	
	Number.	Value.	Number.	Value.	1917.	1918.
Horses.....	10,552	\$1,266,240.00	10,633	\$1,180,263.00	311	186
Mules and asses.....	2,634	355,590.00	2,230	312,200.00	36	22
Milk cows.....	8,058	604,350.00	9,377	768,914.00	228	213
Other cattle.....	14,651	732,550.00	16,198	874,692.00	493	689
Sheep.....	2,408	26,488.00	3,647	45,587.50	181	78
Swine.....	11,985	245,692.50	16,058	361,305.00	945	396
Totals.....	50,288	\$3,230,910.50	58,143	\$3,542,961.50	2,194	1,584

Number of dogs in county March 1, 1917, 1,549; March 1, 1918, 1,662.

Number of sheep killed by dogs, year ending March 1, 1917, 14; March 1, 1918, 21.

Number of sheep killed by wolves, year ending March 1, 1917, 33; March 1, 1918, 7.

Mortality of swine from cholera, year ending March 1, 1917, 587; March 1, 1918, 119.

FARM AND CROP STATISTICS.—NEOSHO COUNTY.

Table showing acres, product and value of field crops in the county for 1917 and 1918.

Crops.	1917.			1918.		
	Acres.	Product.	Value.	Acres.	Product.	Value.
Winter wheat.....bu.	25,627	486,913	\$983,564.26	46,317	1,065,291	\$2,151,887.82
Spring wheat.....bu.						
Corn.....bu.	61,073	1,038,241	1,225,124.38	48,895	342,265	513,397.50
Oats.....bu.	30,186	1,056,510	623,340.90	37,085	1,038,380	726,866.00
Rye.....bu.	98	1,470	2,469.60	126	2,142	3,512.88
Barley.....bu.	11	231	237.93	13	260	273.00
Emmer ("speltz").....bu.				2	52	39.00
Irish potatoes.....bu.	569	42,675	61,878.75	613	36,167	50,995.47
Sweet potatoes.....bu.	16	1,296	2,060.64	2	118	205.32
Cowpeas.....tons	81	101	1,616.00	61	92	1,518.00
Flax.....bu.	8,629	56,088	151,437.60	8,107	40,535	131,738.75
Broom corn.....lbs.	416	197,600	27,664.00	553	182,490	20,986.35
Millet.....tons	262	524	5,240.00	80	100	1,100.00
Sugar beets.....tons				3	18	171.00
Sorghum for syrup.....gals.	341	26,257	18,379.90	348	19,140	21,054.00
for seed.....bu.	154	3,234	4,656.96	317	4,121	7,912.32
for hay.....tons	1,500	4,875	43,875.00	1,958	5,385	48,465.00
Milo for grain.....bu.	382	4,584	5,546.64	170	1,700	2,635.00
for stover*.....tons		955	4,775.00		340	1,700.00
for hay.....tons	40	100	60.00	13	36	234.00
Kafir for grain.....bu.	14,290	200,060	264,079.20	12,612	100,896	156,388.80
for stover*.....tons		35,725	214,350.00		28,377	141,885.00
for hay.....tons	37	92	644.00	55	151	981.50
Feterita for grain.....bu.	455	5,460	7,152.60	251	2,510	3,765.00
for stover*.....tons		1,024	5,120.00		377	1,885.00
for hay.....tons	115	288	1,728.00	81	162	1,134.00
Sudan grass.....tons	223	669	6,021.00	201	603	6,030.00
Jerusalem corn.....tons	19	47	329.00	50	138	897.00
Alfalfa.....tons	4,043	12,129	242,580.00	4,571	12,570	314,250.00
Timothy.....tons	2,945			1,508		
Clover.....tons	2,649			2,061		
Blue grass.....tons	1,008			1,224		
Sweet clover.....tons	180	† 8,044	128,704.00	99	‡ 3,131	68,882.00
Orchard grass.....tons	5					
Other tame grasses.....tons	504			352		
Prairie hay.....tons	21,350	16,012	256,192.00	22,909	11,455	217,645.00
Totals.....	177,208		\$4,289,367.36	190,637		\$4,598,434.71

Corn on hand March 1, 1917, 62,261 bushels; March 1, 1918, 187,355 bushels.

Wheat on hand March 1, 1917, 2,475 bushels; March 1, 1918, 4,190 bushels.

Prairie grass for pasture March 1, 1918; Acres fenced, 73,177; acres not fenced, 1,430.

* Forage after harvesting grain. † Product of 1916. ‡ Product of 1917.

SUMMARY.—NEOSHO COUNTY.

Showing quantity and value of farm products in the county for 1917 and 1918.

Products.	1917.		1918.	
	Quantity.	Value.	Quantity.	Value.
Field crops.....acres	177,208	\$4,289,367.36	190,637	\$4,598,434.71
Animals slaughtered or sold for slaughter.....		547,927.00		705,449.00
Poultry and eggs sold.....		193,411.00		228,120.00
Wool clip.....lbs.	7,388	2,068.64	9,346	5,046.84
Cheese.....lbs.	300	51.00		
Butter.....lbs.	216,491	65,297.70	205,860	80,339.40
Condensed milk.....lbs.				
Milk sold.....		128,458.00		184,435.00
Honey and beeswax.....lbs.	13,958	2,518.44	3,939	984.75
Wood marketed.....		1,316.00		2,874.00
Totals.....		\$5,230,415.14		\$5,805,683.70

Number of cream separators March 1, 1917, 1,036; March 1, 1918, 1,177.

Number of silos March 1, 1917, 85; March 1, 1918, 95.

Number of tractors March 1, 1917, 18; March 1, 1918, 38.

NESS COUNTY.

Organized in 1880; area, 686,372 acres; population, 6,998; rank in population, 76; assessed valuation, \$17,949,337; miles of railroad, main track, 75.20; county seat, Ness City; population, 769.

POPULATION AND VALUATION.—NESS COUNTY.

Table showing total population, by townships and cities, for 1917 and 1918, and the assessed valuation of the municipal townships and cities of 1918.

Townships (and cities).	Population.		Assessed valuation of property, 1918.				
	1917.	1918.	Land.	City lots.	Personal.	Railroad, etc.	Total.
The county.....	7,225	6,998	\$10,631,760	\$455,191	\$4,096,470	\$2,765,916	\$17,949,337
Bazine Village....	*.....	273					
Bazine tp.....	982	706	\$1,433,115	\$34,520	\$537,145	\$400,472	\$2,405,252
Ness City.....	982	769		259,217	427,525	36,683	723,425
Center tp.....	258	225	527,245		215,195	177,263	919,703
Eden tp.....	332	335	677,680	9,060	322,090	333,894	1,342,724
Forrester tp.....	341	384	698,560	270	160,170	236,107	1,122,107
Franklin tp.....	605	675	1,496,930	340	398,555	174	1,895,999
High Point tp....	705	695	1,331,040	360	323,860	2,475	1,657,735
Johnson tp.....	275	252	778,320		205,960		984,280
Ransom.....	285	256		50,686	197,365	26,902	274,953
Nevada tp.....	679	753	1,226,920		386,300	478,469	2,091,689
Utica.....	300	294		51,805	134,520	26,985	213,310
Ohio tp.....	648	534	1,103,595	6,275	326,435	456,959	1,893,264
Brownell.....	*.....	137	1,358,355	42,658	461,350	562,533	2,424,896
Waring tp.....	833	710					

* Not reported separately from township in 1917.

LIVESTOCK.—NESS COUNTY.

Table showing number, value and mortality of livestock in the county for 1917 and 1918.

Livestock.	1917.		1918.		Mortality.	
	Number.	Value.	Number.	Value.	1917.	1918.
Horses.....	9,820	\$1,178,400.00	10,544	\$1,170,384.00	234	306
Mules and asses.....	1,730	233,550.00	1,267	177,380.00	24	23
Milk cows.....	3,083	231,225.00	5,071	415,822.00	81	153
Other cattle.....	25,108	1,255,400.00	26,672	1,440,288.00	693	922
Sheep.....	114	1,254.00	252	3,150.00	13	32
Swine.....	4,960	101,680.00	4,596	103,410.00	188	236
Totals.....	44,815	\$3,001,509.00	48,402	\$3,310,434.00	1,233	1,672

Number of dogs in county March 1, 1917, 812; March 1, 1918, 882.

Number of sheep killed by dogs, year ending March 1, 1917, 1; March 1, 1918, 3.

Number of sheep killed by wolves, year ending March 1, 1918, 3.

Mortality of swine from cholera, year ending March 1, 1917, 2; March 1, 1918, 2.

FARM AND CROP STATISTICS.—NESS COUNTY.

Table showing acres, product and value of field crops in the county for 1917 and 1918.

Crops.	1917.			1918.		
	Acres.	Product.	Value.	Acres.	Product.	Value.
Winter wheat.....bu.	7,704	30,816	\$65,021.76	92,048	644,336	\$1,237,125.12
Spring wheat.....bu.						
Corn.....bu.	68,235	204,705	255,881.25	25,233	126,165	181,462.55
Oats.....bu.	18,232			10,756	75,292	57,974.84
Rye.....bu.	697			1,216	4,864	8,025.60
Barley.....bu.	27,255			6,449	38,694	38,694.00
Emmer ("speltz").....bu.						
Irish potatoes.....bu.	218	6,976	12,208.00	284	4,260	6,816.00
Sweet potatoes.....bu.				3	75	168.75
Cowpeas.....tons						
Flax.....bu.						
Broom corn.....lbs.				80	24,000	2,520.00
Millet.....tons	2,080	2,600	26,000.00	3,087	2,315	27,780.00
Sugar beets.....tons						
Sorghum for syrup.....gals.	5			157		
for seed.....bu.	1,240	7,440	13,392.00	4,025	12,075	22,097.25
for hay.....tons	22,323	39,066	312,528.00	12,244	15,305	145,397.50
Milo for grain.....bu.	13,729	56,103	162,414.07	5,408	21,632	34,611.20
for stover*.....tons		13,729	54,916.00		5,408	37,856.00
for hay.....tons	124	124	744.00	40	60	510.00
Kafir for grain.....bu.	18,709	56,127	89,803.20	8,466	33,864	52,489.20
for stover*.....tons		28,063	168,378.00		8,466	71,961.00
for hay.....tons	366	549	4,392.00	241	241	2,410.00
Feterita for grain.....bu.	7,681	38,405	57,607.50	1,982	7,928	11,892.00
for stover*.....tons		7,681	46,086.00		2,478	17,346.00
for hay.....tons	375	657	5,256.00	233	350	3,150.00
Sudan grass.....tons	446	669	6,690.00	863	1,510	15,100.00
Jerusalem corn.....tons	20	30	240.00	33	33	330.00
Alfalfa.....tons	2,585	5,429	97,722.00	2,853	5,706	108,414.00
Timothy.....tons						
Clover.....tons						
Blue grass.....tons						
Sweet clover.....tons	13	†		6	‡	
Orchard grass.....tons						
Other tame grasses.....tons				2		
Prairie hay.....tons	2,285	2,285	27,420.00	1,092	819	12,285.00
Totals.....	194,322		\$1,406,699.78	176,801		\$2,100,416.01

Corn on hand March 1 1917, 24,353 bushels; March 1, 1918, 11,905 bushels.

Wheat on hand March 1, 1917, 50,848 bushels; March 1, 1918, 4,473 bushels.

Prairie grass for pasture March 1, 1918: Acres fenced, 321,658; acres not fenced, 7,137.

* Forage after harvesting grain. † Product of 1916. ‡ Product of 1917.

SUMMARY.—NESS COUNTY.

Showing quantity and value of farm products in the county for 1917 and 1918.

Products.	1917.		1918.	
	Quantity.	Value.	Quantity.	Value.
Field crops.....acres	194,322	\$1,406,699.78	176,801	\$2,100,416.01
Animals slaughtered or sold for slaughter.....		293,230.00		280,650.00
Poultry and eggs sold.....		81,832.00		87,586.00
Wool clip.....lbs.	630	176.40	400	216.00
Cheese.....lbs.	220	37.40	50	9.00
Butter.....lbs.	69,324	20,797.20	80,193	31,275.27
Condensed milk.....lbs.				
Milk sold.....		53,181.00		97,294.00
Honey and beeswax.....lbs.				
Wood marketed.....				45.00
Totals.....		\$1,855,953.78		\$2,597,491.28

Number of cream separators March 1, 1917, 532; March 1, 1918, 649.

Number of silos March 1, 1917, 15; March 1, 1918, 26.

Number of tractors March 1, 1917, 55; March 1, 1918, 58.

NORTON COUNTY.

Organized in 1872; area, 565,257 acres; population, 11,398; rank in population, 59; assessed valuation, \$19,536,888; miles of railroad, main track, 88.61; county seat, Norton; population, 2,032.

POPULATION AND VALUATION.—NORTON COUNTY.

Table showing total population, by townships and cities, for 1917 and 1918, and the assessed valuation of the municipal townships and cities of 1918.

Townships (and cities).	Population.		Assessed valuation of property, 1918.				
	1917.	1918.	Land.	City lots.	Personal.	Railroad, etc.	Total.
The county.....	11,815	11,398	\$9,670,040	\$1,606,130	\$5,056,330	\$3,204,388	\$19,536,888
Aldine tp.....	287	237	\$347,455	.....	\$111,195	\$2,108	\$460,758
Almelo tp.....	255	256	312,965	\$4,760	152,135	545	470,405
Almena.....	674	647	.....	240,350	270,815	45,414	556,579
Almena tp.....	585	575	892,280	.....	330,200	386,863	1,609,343
Belle Plaine tp.....	380	373	328,335	.....	97,975	1,443	427,753
Norton.....	2,079	2,032	.....	1,029,680	821,030	137,332	1,988,042
Center tp.....	595	583	749,875	.....	214,815	297,903	1,262,593
Clayton tp.....	220	228	421,940	.....	133,420	308,577	863,937
Crystal tp.....	295	286	305,900	.....	163,910	1,043	470,853
Emmett tp.....	421	426	524,890	600	184,440	495,116	1,205,046
Garfield tp.....	273	291	394,275	.....	128,525	2,159	524,959
Grant tp.....	649	614	511,300	.....	222,690	146,906	880,896
Harrison tp.....	332	326	374,215	.....	129,320	1,312	504,847
Highland tp.....	279	270	355,350	.....	105,265	1,485	462,100
Lenora.....	514	513	.....	201,205	457,430	7,494	666,129
Lenora tp.....	295	294	388,085	.....	156,330	49,414	593,829
Leota tp.....	500	447	563,365	14,430	153,400	671,726	1,402,921
Lincoln tp.....	273	218	310,800	.....	103,425	37,128	451,353
Modell tp.....	329	318	380,300	.....	87,210	167,134	634,644
Clayton.....	186	175	.....	50,225	80,600	37,046	167,871
Noble tp.....	245	244	310,600	.....	94,110	885	405,595
Orange tp.....	282	260	381,500	.....	97,845	2,125	481,470
Rock Branch tp....	226	256	297,630	.....	145,560	821	444,011
Rockwell tp.....	259	261	382,220	.....	101,090	112,125	595,435
Sand Creek tp.....	364	319	319,630	.....	105,140	1,043	425,813
Edmond.....	207	196	.....	47,150	86,335	16,104	149,589
Solomon tp.....	313	284	355,185	.....	72,525	95,465	523,175
West Union tp.....	498	469	461,945	17,730	249,595	177,672	906,942

LIVESTOCK.—NORTON COUNTY.

Table showing number, value and mortality of livestock in the county for 1917 and 1918.

Livestock.	1917.		1918.		Mortality.	
	Number.	Value.	Number.	Value.	1917.	1918.
Horses.....	11,825	\$1,419,000.00	12,102	\$1,343,322.00	329	361
Mules and asses.....	3,060	413,100.00	2,331	326,340.00	44	15
Milk cows.....	7,615	571,125.00	8,868	727,176.00	129	162
Other cattle.....	22,602	1,130,100.00	19,478	1,051,812.00	590	580
Sheep.....	883	9,713.00	766	9,575.00	17	8
Swine.....	15,442	316,561.00	10,812	243,270.00	812	728
Totals.....	61,427	\$3,859,599.00	54,357	\$3,701,495.00	1,921	1,854

Number of dogs in county March 1, 1917, 1,202; March 1, 1918, 1,255.

Number of sheep killed by dogs, year ending March 1, 1918, 2.

Number of sheep killed by wolves, year ending March 1, 1917, 1.

Mortality of swine from cholera, year ending March 1, 1917, 68; March 1, 1918, 188.

FARM AND CROP STATISTICS.—NORTON COUNTY.

Table showing acres, product and value of field crops in the county for 1917 and 1918.

Crops.	1917.			1918.		
	Acres.	Product.	Value.	Acres.	Product.	Value.
Winter wheat.....bu.	43,001	172,004	\$335,407.80	63,392	253,568	\$486,850.56
Spring wheat.....bu.	10	10	19.00	30	90	172.80
Corn bu.....bu.	152,451	152,451	179,892.18	120,215	721,290	988,167.30
Oats.....bu.	11,222	56,110	36,471.50	9,393	37,572	30,057.60
Rye.....bu.	516	2,064	3,612.00	2,294	4,588	7,570.20
Barley.....bu.	27,962	223,696	219,222.08	29,107	261,963	261,963.00
Emmer ("speltz").....bu.				30	90	76.50
Irish potatoes.....bu.	691	9,674	13,446.86	704	10,560	15,734.40
Sweet potatoes.....bu.						
Cowpeas.....tons	4	5	80.00			
Flax.....bu.						
Broom corn.....lbs.	30	9,000	1,170.00	10	3,000	300.00
Millet.....tons	3,153	1,577	15,770.00	2,424	2,424	26,664.00
Sugar beets.....tons				1	6	57.00
Sorghum for syrup.....gals.	36			68		
for seed.....bu.	1,004	2,008	3,514.00	2,960	20,720	37,296.00
for hay.....tons	12,672	12,672	114,048.00	16,638	24,957	237,091.50
Milo for grain.....bu.	1,518	3,036	4,554.00	5,366	32,196	49,903.80
for stover*.....tons					8,049	52,318.50
for hay.....tons	125	62	372.00	171	299	2,242.50
Kafir for grain.....bu.	10,769			16,066	64,264	106,035.60
for stover*.....tons		10,769	91,536.50		40,165	240,990.00
for hay.....tons	480	360	3,600.00	948	2,607	22,159.50
Feterita for grain.....bu.	1,364	4,092	6,138.00	1,373	9,611	14,897.05
for stover*.....tons		341	2,216.50		2,403	15,619.50
for hay.....tons	169	84	588.00	244	427	3,629.50
Sudan grass.....tons	641	480	4,320.00	1,095	1,643	16,430.00
Jerusalem corn.....tons	6	4	40.00	3	8	68.00
Alfalfa.....tons	6,185	12,370	259,770.00	5,451	13,628	272,560.00
Timothy.....tons				2		
Clover.....tons				13		
Blue grass.....tons						
Sweet clover.....tons	109	†		20	‡	
Orchard grass.....tons	1					
Other tame grasses.....tons						
Prairie hay.....tons	11,458	5,729	85,935.00	9,816	7,362	110,430.00
Totals.....	285,577		\$1,381,723.42	287,834		\$2,999,284.81

Corn on hand March 1, 1917, 208,190 bushels; March 1, 1918, 41,955 bushels.

Wheat on hand March 1, 1917, 37,420 bushels; March 1, 1918, 11,570 bushels.

Prairie grass for pasture March 1, 1918: Acres fenced, 175,058; Acres not fenced, 5,635.

* Forage after harvesting grain. † Product of 1916. ‡ Product of 1917.

SUMMARY.—NORTON COUNTY.

Showing quantity and value of farm products in the county for 1917 and 1918.

Products.	1917.		1918.	
	Quantity.	Value.	Quantity.	Value.
Field crops.....acres	285,577	\$1,381,723.42	287,834	\$2,999,284.81
Animals slaughtered or sold for slaughter.....		894,830.00		674,155.00
Poultry and eggs sold.....		150,345.00		148,357.00
Wool clip.....lbs.	600	168.00	125	67.50
Cheese.....lbs.	150	25.50	50	9.00
Butter.....lbs.	215,515	65,854.50	186,166	73,362.24
Condensed milk.....lbs.				
Milk sold.....		110,623.00		167,350.00
Honey and beeswax.....lbs.	1,157	210.26	27	6.75
Wood marketed.....		252.00		503.00
Totals.....		\$2,604,031.68		\$4,063,095.30

Number of cream separators March 1, 1917, 1,003; March 1, 1918, 1,117.

Number of silos March 1, 1917, 115; March 1, 1918, 194.

Number of tractors March 1, 1917, 13; March 1, 1918, 17.

OSAGE COUNTY.

Organized in 1859; area, 458,580 acres; population, 20,544; rank in population, 27; assessed valuation, \$35,942,767; miles of railroad, main track, 139.11; county seat, Lyndon; population, 752.

POPULATION AND VALUATION.—OSAGE COUNTY.

Table showing total population, by townships and cities, for 1917 and 1918, and the assessed valuation of the municipal townships and cities of 1918.

Townships (and cities).	Population.		Assessed valuation of property, 1918.				
	1917.	1918.	Land.	City lots.	Personal.	Railroad, etc.	Total.
The county	20,034	20,544	\$18,932,146	\$2,563,853	\$7,299,135	\$7,147,633	\$35,942,767
Quenemo.....	708	786		\$219,355	\$201,190	\$131,883	\$552,428
Agency tp.....	524	565	\$900,243	11,640	188,830	994,351	2,095,064
Arvonia tp.....	569	645	1,130,760	5,483	302,375	142,300	1,580,918
Barclay tp.....	665	678	1,123,038	4,750	258,490	614,357	2,000,635
Burlingame.....	1,426	1,423		556,245	420,615	72,964	1,049,824
Burlingame tp..	1,270	1,311	2,127,242		530,625	422,081	3,079,948
Dragoon tp.....	624	624	1,040,657		307,690	214,720	1,563,067
Elk tp.....	1,208	1,246	1,497,733	216,200	779,480	274,681	2,768,094
Fairfax tp.....	706	699	1,188,006		362,250	3,636	1,553,892
Osage City.....	3,020	3,076		824,160	504,725	281,873	1,610,758
Grant tp.....	666	739	1,177,804	11,060	301,770	411,670	1,902,304
Junction tp.....	1,139	1,130	1,301,422	29,900	606,830	335,252	2,273,404
Lincoln tp.....	539	592	659,413	2,385	194,210	158,341	1,014,349
Melvorn.....	530	513		106,135	138,475	55,330	299,940
Melvorn tp.....	806	862	1,084,563		295,060	431,093	1,810,716
Olivet tp.....	794	892	1,475,617	32,925	407,385	599,456	2,515,383
Carbondale.....	471	476		113,595	113,955	41,617	269,167
Ridgeway tp.....	615	562	1,139,874		265,565	416,701	1,822,140
Scranton.....	735	700		129,710	88,270	104,780	322,760
Scranton tp.....	785	796	948,776		220,260	249,879	1,418,915
Superior tp.....	775	772	1,028,082	36,385	242,450	602,043	1,908,960
Lyndon.....	744	752		263,925	223,275	21,194	508,394
Valley Brook tp..	715	705	1,108,916		345,360	567,431	2,021,707

LIVESTOCK.—OSAGE COUNTY.

Table showing number, value and mortality of livestock in the county for 1917 and 1918.

Livestock.	1917.		1918.		Mortality.	
	Number.	Value.	Number.	Value.	1917.	1918.
Horses.....	12,181	\$1,461,720.00	12,494	\$1,386,834.00	284	271
Mules and asses.....	2,861	386,235.00	2,103	294,420.00	25	25
Milk cows.....	10,133	759,975.00	10,899	893,718.00	163	266
Other cattle.....	27,754	1,387,700.00	27,876	1,505,304.00	613	916
Sheep.....	3,398	37,378.00	6,251	78,137.50	70	100
Swine.....	21,534	441,447.00	27,681	622,822.50	1,738	1,358
Totals.....	77,861	\$4,474,455.00	87,304	\$4,781,236.00	2,893	2,936

Number of dogs in county March 1, 1917, 1,601; March 1, 1918, 1,874.

Number of sheep killed by dogs, year ending March 1, 1917, 76; March 1, 1918, 35.

Number of sheep killed by wolves, year ending March 1, 1917, 6; March 1, 1918, 48.

Mortality of swine from cholera, year ending March 1, 1917, 1,426; March 1, 1918, 799.

FARM AND CROP STATISTICS.—OSAGE COUNTY.

Table showing acres, product and value of field crops in the county for 1917 and 1918.

Crops.	1917.			1918.		
	Acres.	Product.	Value.	Acres.	Product.	Value.
Winter wheat.....bu.	12,359	296,616	\$605,096.64	38,047	913,128	\$1,871,912.40
Spring wheat.....bu.				79	1,580	3,207.40
Corn.....bu.	83,795	2,011,080	2,212,188.00	67,418	539,344	809,016.00
Oats.....bu.	24,055	865,980	510,928.20	30,669	889,401	613,686.69
Rye.....bu.	788	13,396	22,773.20	1,335	26,700	40,851.00
Barley.....bu.	11	297	297.00	102	2,550	2,677.50
Emmer ("speltz").....bu.	2	64	40.96	14	378	279.72
Irish potatoes.....bu.	928	58,464	90,619.20	1,176	68,208	92,080.80
Sweet potatoes.....bu.	3	270	437.40	2	140	245.00
Cowpeas.....tons	19	24	384.00	7	11	181.50
Flax.....bu.	900	7,650	20,655.00	361	2,527	8,212.75
Broom corn.....lbs.	5	1,625	227.50			
Millet.....tons	394	591	5,910.00	407	814	8,954.00
Sugar beets.....				2	12	114.00
Sorghum for syrup.....gals.	59	3,835	2,684.50	153	9,945	10,939.50
for seed.....bu.	826	9,912	13,579.44	565	6,215	10,876.25
for hay.....tons	2,423	8,481	50,886.00	2,596	6,490	48,675.00
Milo for grain.....bu.	238	3,570	4,462.50	505	5,050	8,030.00
for stover*.....tons		654	2,616.00		1,263	6,315.00
for hay.....tons	16	40	240.00	103	283	1,839.50
Kafir for grain.....bu.	14,605	116,840	170,586.40	9,973	69,811	111,697.60
for stover*.....tons		51,117	306,702.00		19,946	119,676.00
for hay.....tons	30	75	450.00	217	543	4,072.50
Feterita for grain.....bu.	422	8,018	10,984.66	462	6,930	11,088.00
for stover*.....tons		1,688	8,440.00		924	4,620.00
for hay.....tons	161	644	3,864.00	181	453	3,171.00
Sudan grass.....tons	113	452	3,616.00	117	351	3,861.00
Jerusalem corn.....tons				5	13	97.50
Alfalfa.....tons	21,559	60,365	1,146,935.00	26,177	52,354	1,204,142.00
Timothy.....tons	5,036			5,679		
Clover.....tons	7,634			4,377		
Blue grass.....tons	4,489	† 29,432	470,912.00	3,326	† 9,420	188,400.00
Sweet clover.....tons	293			296		
Orchard grass.....tons	30			104		
Other tame grasses.....tons	1,746			1,305		
Prairie hay.....tons	26,849	26,849	402,735.00	27,102	20,327	365,886.00
Totals.....	209,788		\$6,069,250.60	222,862		\$5,554,855.61

Corn on hand March 1, 1917, 30,914 bushels; March 1, 1918, 366,295 bushels.

Wheat on hand March 1, 1917, 10 bushels; March 1, 1918, 8,533 bushels.

Prairie grass for pasture March 1, 1918: Acres fenced, 132,228; acres not fenced, 160.

* Forage after harvesting grain. † Product of 1916. ‡ Product of 1917.

SUMMARY.—OSAGE COUNTY.

Showing quantity and value of farm products in the county for 1917 and 1918.

Products.	1917.		1918.	
	Quantity.	Value.	Quantity.	Value.
Field crops.....acres	209,788	\$6,069,250.60	222,862	\$5,554,855.61
Animals slaughtered or sold for slaughter.....		1,207,287.00		1,960,915.00
Poultry and eggs sold.....		224,961.00		269,663.00
Wool clip.....lbs.	8,409	2,354.52	11,305	6,104.70
Cheese.....lbs.			121	21.78
Butter.....lbs.	243,435	73,270.50	255,324	101,070.66
Condensed milk.....lbs.				
Milk sold.....		175,738.00		266,902.00
Honey and beeswax.....lbs.	38,253	6,894.54	12,047	3,014.25
Wood marketed.....		1,605.00		1,510.00
Totals.....		\$7,761,361.16		\$8,164,057.00

Number of cream separators March 1, 1917, 1,219; March 1, 1918, 1,492.

Number of silos March 1, 1917, 161; March 1, 1918, 169.

Number of tractors March 1, 1917, 14; March 1, 1918, 47.

OSBORNE COUNTY.

Organized in 1871; area, 573,144 acres; population, 12,756; rank in population, 52; assessed valuation, \$29,894,862; miles of railroad, main track, 65.36; county seat, Osborne; population, 1,567.

POPULATION AND VALUATION.—OSBORNE COUNTY.

Table showing total population, by townships and cities, for 1917 and 1918, and the assessed valuation of the municipal townships and cities of 1918.

Townships (and cities).	Population.		Assessed valuation of property, 1918.				
	1917.	1918.	Land.	City lots.	Personal.	Railroad, etc.	Total.
The county	13,558	12,756	\$17,573,342	\$2,494,400	\$8,273,610	\$1,553,510	\$29,894,862
Portis	387	341		\$159,570	\$202,210	\$18,067	\$379,847
Bethany tp.	479	415	\$1,122,318	4,880	257,050	149,972	1,534,220
Bloom tp.	503	569	985,995		346,790	29,964	1,362,749
Corinth tp.	404	373	1,065,525		256,970	107,536	1,430,031
Covert tp.	343	370	479,853	14,550	203,780	1,608	699,791
Delhi tp.	478	421	787,100		302,400	2,608	1,092,108
Grant tp.	342	313	614,865		186,600	1,413	802,878
Hancock tp.	348	312	684,540		209,300	930	894,770
Hawkeye tp.	356	362	586,095		198,860	1,017	785,972
Independence tp. .	323	286	597,884		204,770	555	803,209
Jackson tp.	387	385	648,453		213,240	2,461	864,154
Kill Creek tp.	264	244	554,458		222,310	527	777,295
Lawrence tp.	330	350	651,091		153,390	662	805,143
Liberty tp.	228	208	524,537		142,150	41,293	707,980
Mount Ayr tp.	350	334	606,091		253,760	771	860,622
Natoma	491	496		215,880	282,300	22,004	520,184
Natoma tp.	269	216	458,848		145,270	190,550	794,668
Osborne	1,869	1,567		1,070,340	1,488,190	44,811	2,603,341
Penn tp.	435	432	1,516,216	6,760	350,490	216,991	2,090,457
Downs	1,666	1,542		804,030	496,520	106,543	1,407,093
Ross tp.	527	525	1,321,860		386,990	195,560	1,904,410
Round Mound tp. .	296	349	516,449		183,740	1,100	701,289
Alton	469	470		206,280	433,290	19,608	659,178
Sumner tp.	568	556	1,150,487		312,860	213,754	1,677,101
Tilden tp.	466	419	1,052,770	12,110	329,840	180,782	1,575,502
Valley tp.	301	282	662,260		162,400	737	825,397
Victor tp.	420	390	541,597		163,330	886	705,813
Winfield tp.	259	229	444,050		184,810	800	629,660

LIVESTOCK.—OSBORNE COUNTY.

Table showing number, value and mortality of livestock in the county for 1917 and 1918.

Livestock.	1917.		1918.		Mortality	
	Number.	Value.	Number.	Value.	1917.	1918.
Horses	13,583	\$1,629,960.00	13,458	\$1,493,838.00	94	150
Mules and asses ..	3,284	443,340.00	2,417	338,380.00	9	9
Milk cows	7,173	537,975.00	8,648	709,136.00	58	73
Other cattle	35,680	1,784,000.00	31,168	1,683,072.00	442	574
Sheep	2,173	23,903.00	1,807	22,587.50	79	33
Swine	13,291	272,465.50	10,714	241,065.00	590	288
Totals	75,184	\$4,691,643.50	68,212	\$4,488,078.50	1,272	1,127

Number of dogs in county March 1, 1917, 1,421; March 1, 1918, 1,433.

Number of sheep killed by dogs, year ending March 1, 1917, 18; March 1, 1918, 7.

Number of sheep killed by wolves, year ending March 1, 1917, 17.

Mortality of swine from cholera, year ending March 1, 1917, 456; March 1, 1918, 41.

FARM AND CROP STATISTICS.—OSBORNE COUNTY.

Table showing acres, product and value of field crops in the county for 1917 and 1918.

Crops.	1917.			1918.		
	Acres.	Product.	Value.	Acres.	Product.	Value.
Winter wheat.....bu.	35,217	211,302	\$435,282.12	96,172	769,376	\$1,461,814.40
Spring wheat.....bu.	10	30	60.00			
Corn.....bu.	150,957	150,957	188,696.25	97,978	489,890	734,835.00
Oats.....bu.	17,615	123,305	82,614.35	24,553	441,954	327,045.96
Rye.....bu.	1,115	4,460	7,805.00	3,366	33,660	55,539.00
Barley.....bu.	9,146	45,730	45,730.00	8,498	152,964	152,964.00
Emmer ("speltz").....bu.						
Irish potatoes.....bu.	834	12,510	18,765.00	781	18,744	28,865.76
Sweet potatoes.....bu.				2	100	225.00
Cowpeas.....tons						
Flax.....bu.						
Broom corn.....lbs.				30	8,250	825.00
Millet.....tons	712	712	7,120.00	652	652	7,172.00
Sugar beets.....tons						
Sorghum for syrup.....gals.				62	1,240	1,364.00
for seed.....bu.	876	7,008	11,002.56	3,546	31,914	59,679.18
for hay.....tons	18,949	29,424	205,968.00	11,453	22,906	183,248.00
Milo for grain.....bu.	1,518	1,518	2,277.00	200	1,200	1,920.00
for stover*.....tons		1,138	5,690.00		300	1,500.00
for hay.....tons	35	26	182.00	23	46	299.00
Kafir for grain.....bu.	20,272			15,866	63,464	101,542.40
for stover*.....tons		20,272	121,632.00		27,766	180,479.00
for hay.....tons	514	898	7,184.00	376	752	6,016.00
Feterita for grain.....bu.	1,830	16,470	27,999.00	2,412	24,120	38,592.00
for stover*.....tons		1,830	10,065.00		4,221	16,884.00
for hay.....tons	360	270	2,160.00	309	541	3,787.00
Sudan grass.....tons	405	608	4,864.00	874	1,967	19,670.00
Jerusalem corn.....tons				9	18	144.00
Alfalfa.....tons	15,130	30,260	544,680.00	16,313	36,704	734,080.00
Timothy.....tons						
Clover.....tons						
Blue grass.....tons						
Sweet clover.....tons	111	†		42	‡ 50	900.00
Orchard grass.....tons				12		
Other tame grasses.....tons						
Prairie hay.....tons	8,625	6,468	84,084.00	7,659	5,744	86,160.00
Totals.....	284,231		\$1,813,860.28	291,188		\$4,205,550.70

Corn on hand March 1, 1917, 197,106 bushels; March 1, 1918, 33,249 bushels.

Wheat on hand March 1, 1917, 98,174 bushels; March 1, 1918, 16,314 bushels.

Prairie grass for pasture March 1, 1918: Acres fenced, 191,851; acres not fenced, 1,533.

* Forage after harvesting grain. † Product of 1916. ‡ Product of 1917.

SUMMARY.—OSBORNE COUNTY.

Showing quantity and value of farm products in the county for 1917 and 1918.

Products.	1917.		1918.	
	Quantity.	Value.	Quantity.	Value.
Field crops.....acres	284,231	\$1,813,860.28	291,188	\$4,205,550.70
Animals slaughtered or sold for slaughter.....		885,654.00		934,067.00
Poultry and eggs sold.....		181,436.00		168,010.00
Wool clip.....lbs.	4,790	1,341.20	6,105	3,296.70
Cheese.....lbs.				
Butter.....lbs.	243,124	72,937.20	236,757	92,335.23
Condensed milk.....lbs.				
Milk sold.....		140,279.00		209,137.00
Honey and beeswax.....lbs.	5,143	942.14	2,578	646.50
Wood marketed.....		1,043.00		579.00
Totals.....		\$3,097,492.82		\$5,613,622.13

Number of cream separators March 1, 1917, 1,225; March 1, 1918, 1,263.

Number of silos March 1, 1917, 127; March 1, 1918, 196.

Number of tractors March 1, 1917, 94; March 1, 1918, 84.

OTTAWA COUNTY.

Organized in 1866; area, 459,300 acres; population, 10,805; rank in population, 63; assessed valuation, \$29,993,934; miles of railroad, main track, 79.26; county seat, Minneapolis; population, 1,776.

POPULATION AND VALUATION.—OTTAWA COUNTY.

Table showing total population, by townships and cities, for 1917 and 1918, and the assessed valuation of the municipal townships and cities of 1918.

Townships (and cities).	Population.		Assessed valuation of property, 1918.				
	1917.	1918.	Land.	City lots.	Personal.	Railroad, etc.	Total.
The county.....	11,324	10,805	\$17,809,765	\$2,430,925	\$6,747,735	\$3,005,509	\$29,993,934
Bennington.....	363	345	.....	\$199,120	\$306,885	\$32,410	\$538,415
Bennington tp....	373	333	\$905,725	.....	258,850	68,630	1,233,205
Blaine tp.....	356	319	919,895	.....	182,695	186,628	1,289,218
Buckeye tp.....	307	316	1,121,965	2,055	246,880	186,054	1,556,954
Center tp.....	251	316	1,010,910	.....	138,525	269,427	1,418,862
Chapman tp.....	401	392	618,275	.....	186,250	124,444	928,969
Minneapolis.....	1,958	1,776	.....	1,354,975	1,042,765	151,824	2,549,564
Concord tp.....	386	381	1,265,725	2,240	286,315	251,191	1,805,471
Culver.....	354	256	.....	114,200	132,190	14,918	261,308
Culver tp.....	421	405	956,400	.....	248,160	137,284	1,341,844
Durham tp.....	173	205	500,465	.....	177,150	11,680	689,295
Ada.....	235	180	554	836,315	417,335	256,404	1,568,314
Fountain tp.....	359	374	.....	.....	.....	.....	.....
Garfield tp.....	349	397	1,449,105	.....	380,065	218,225	2,047,395
Wells.....	87	95	614,385	24,635	257,330	250,602	1,146,952
Grant tp.....	267	282	.....	.....	.....	.....	.....
Henry tp.....	190	179	457,865	.....	113,510	10,555	581,930
Niles.....	183	180	896,495	19,635	365,985	77,514	1,359,629
Lincoln tp.....	307	306	1,091,465	.....	226,225	4,884	1,322,574
Logan tp.....	492	477	.....	141,705	170,340	31,906	343,951
Tescott.....	451	406	930,695	.....	276,675	169,988	1,377,358
Morton tp.....	442	403	632,570	4,540	131,125	292,388	1,060,623
Ottawa tp.....	272	265	669,925	.....	132,855	22,844	825,624
Richland tp.....	310	296	.....	509,560	433,465	32,485	975,510
Delphos.....	896	835	1,619,250	.....	248,985	200,285	2,068,520
Sheridan tp.....	429	399	666,905	.....	247,050	674	914,629
Sherman tp.....	395	374	.....	.....	.....	.....	.....
Stanton tp.....	317	313	645,430	.....	140,125	2,265	787,820

LIVESTOCK.—OTTAWA COUNTY.

Table showing number, value and mortality of livestock in the county for 1917 and 1918.

Livestock.	1917.		1918.		Mortality.	
	Number.	Value.	Number.	Value.	1917.	1918.
Horses.....	10,016	\$1,201,920.00	9,813	\$1,089,243.00	145	209
Mules and asses.....	2,460	332,100.00	2,097	293,580.00	13	14
Milk cows.....	5,046	378,450.00	6,440	528,080.00	40	53
Other cattle.....	28,126	1,406,300.00	28,124	1,518,696.00	363	629
Sheep.....	151	1,661.00	91	1,137.50	10	6
Swine.....	9,493	194,606.50	11,617	261,382.50	188	188
Totals.....	55,292	\$3,515,037.50	58,182	\$3,692,119.00	759	1,099

Number of dogs in county March 1, 1917, 875; March 1, 1918, 1,105.

Number of sheep killed by dogs, year ending March 1, 1918, 1.

Mortality of swine from cholera, year ending March 1, 1917, 20; March 1, 1918, 65.

FARM AND CROP STATISTICS.—OTTAWA COUNTY.

Table showing acres, product and value of field crops in the county for 1917 and 1918.

Crops.	1917.			1918.		
	Acres.	Product.	Value.	Acres.	Product.	Value.
Winter wheat.....bu.	34,359	240,513	\$493,051.65	42,673	469,403	\$929,417.94
Spring wheat.....bu.	10	50	99.50	35	315	617.40
Corn.....bu.	114,397	686,382	755,020.20	95,862	383,448	563,668.56
Oats.....bu.	36,924	553,860	365,547.60	37,481	674,658	492,500.34
Rye.....bu.	2,459	24,590	41,557.10	3,660	51,240	81,471.60
Barley.....bu.	92	1,932	1,932.00	1,624	32,480	34,104.00
Emmer ("speltz").....bu.						
Irish potatoes.....bu.	572	17,732	26,598.00	607	13,961	22,337.60
Sweet potatoes.....bu.	12	840	1,176.00	6	240	480.00
Cowpeas.....tons	17	21	336.00	14	21	346.50
Flax.....bu.						
Broom corn.....lbs.	5	1,375	192.50	5	1,250	125.00
Millet.....tons	539	539	5,390.00	302	453	4,983.00
Sugar beets.....tons						
Sorghum for syrup.....gals.	26	1,040	728.00	44	1,760	1,936.00
for seed.....bu.	900	9,000	13,500.00	1,448	8,688	16,507.20
for hay.....tons	5,327	11,986	71,916.00	6,312	11,046	77,322.00
Milo for grain.....bu.	100	1,000	1,400.00	1,295	9,065	14,957.25
for stover*.....tons		150	750.00		1,943	11,658.00
for hay.....tons	5	10	70.00	115	173	1,297.50
Kafir for grain.....bu.	9,724	58,344	86,932.56	11,337	79,359	134,910.30
for stover*.....tons		21,879	131,274.00		22,674	136,044.00
for hay.....tons	521	1,172	8,790.00	292	511	4,088.00
Feterita for grain.....bu.	3,419	47,866	70,363.02	4,532	45,320	70,246.00
for stover*.....tons		6,838	27,352.00		5,665	22,660.00
for hay.....tons	355	355	2,840.00	816	1,224	7,956.00
Sudan grass.....tons	405	1,113	10,017.00	2,332	4,081	40,810.00
Jerusalem corn.....tons	5	11	82.50	59	103	824.00
Alfalfa.....tons	11,630	29,075	523,350.00	13,341	30,017	600,340.00
Timothy.....tons	15					
Clover.....tons						
Blue grass.....tons				32		
Sweet clover.....tons	21	†		51	‡	131
Orchard grass.....tons				5		
Other tame grasses.....tons						
Prairie hay.....tons	7,651	3,825	53,550.00	4,955	2,478	37,170.00
Totals.....	229,490		\$2,693,815.63	229,235		\$3,311,267.19

Corn on hand March 1, 1917, 118,836 bushels; March 1, 1918, 61,375 bushels.

Wheat on hand March 1, 1917, 39,160 bushels; March 1, 1918, 19,695 bushels.

Prairie grass for pasture March 1, 1918: Acres fenced, 114,507; acres not fenced, 6,909.

* Forage after harvesting grain. † Product of 1916. ‡ Product of 1917.

SUMMARY.—OTTAWA COUNTY.

Showing quantity and value of farm products in the county for 1917 and 1918.

Products.	1917.		1918.	
	Quantity.	Value.	Quantity.	Value.
Field crops.....acres	229,490	\$2,693,815.63	229,235	\$3,311,267.19
Animals slaughtered or sold for slaughter.....		1,377,368.00		1,428,807.00
Poultry and eggs sold.....		171,568.00		173,817.00
Wool clip.....lbs.	32	8.96	55	29.70
Cheese.....lbs.				
Butter.....lbs.	227,140	68,142.00	195,013	76,055.07
Condensed milk.....lbs.				
Milk sold.....		85,341.00		156,357.00
Honey and beeswax.....lbs.	5,650	1,017.00	6,241	1,580.25
Wood marketed.....		150.00		918.00
Totals.....		\$4,397,410.59		\$5,148,831.21

Number of cream separators March 1, 1917, 967; March 1, 1918, 1,120.

Number of silos March 1, 1917, 71; March 1, 1918, 112.

Number of tractors, March 1, 1917, 47; March 1, 1918, 57.

PAWNEE COUNTY.

Organized in 1872; area, 481,842 acres; population, 9,217; rank in population, 70; assessed valuation, \$28,812,887; miles of railroad, main track, 95.99; county seat, Larned; population, 3,275.

POPULATION AND VALUATION.—PAWNEE COUNTY.

Table showing total population, by townships and cities, for 1917 and 1918, and the assessed valuation of the municipal townships and cities of 1918.

Townships (and cities).	Population.		Assessed valuation of property, 1918.				
	1917.	1918.	Land.	City lots.	Personal.	Railroad, etc.	Total.
The county.....	9,498	9,217	\$17,680,825	\$2,807,415	\$5,763,480	\$2,561,167	\$28,812,887
Ash Valley tp....	230	298	\$926,790	\$21,290	\$146,190	\$40,112	\$1,134,382
Brown's Grove tp.	625	429	699,215	76,675	236,265	215,647	1,227,802
Conkling tp.....	243	243	687,340	.....	155,175	20,768	863,283
Garfield.....	297	309	.....	123,740	242,890	49,047	415,677
Garfield tp.....	507	508	1,795,655	.....	379,575	383,166	2,558,396
Grant tp.....	675	415	766,035	49,745	282,170	199,628	1,297,578
Keysville tp....	428	420	1,398,590	.....	253,505	683	1,652,778
Larned.....	3,530	3,275	.....	2,525,830	1,655,910	210,782	4,392,522
Larned tp.....	615	550	1,661,895	.....	312,470	670,021	2,644,386
Lincoln tp.....	*	209	626,610	.....	121,930	.....	748,540
Logan tp.....	250	262	988,230	.....	158,340	142,609	1,289,179
Morton tp.....	215	241	886,800	2,990	161,530	116,366	1,67,686
Pawnee tp.....	270	239	1,003,125	.....	220,980	3,488	1,227,593
Pleasant Ridge tp.	309	294	1,161,550	2,280	372,535	240,679	1,777,044
Pleasant Valley tp.	437	473	1,670,995	4,865	356,385	117,559	2,129,804
River tp.....	350	307	856,670	.....	205,355	124,516	1,186,541
Shirley tp.....	*	192	550,040	.....	89,885	880	640,805
Valley Center tp..	249	281	956,885	.....	232,865	.....	1,189,750
Walnut tp.....	268	272	1,044,400	.....	199,525	25,216	1,269,141

* Organized in 1918.

LIVESTOCK.—PAWNEE COUNTY.

Table showing number, value and mortality of livestock in the county for 1917 and 1918.

Livestock.	1917.		1918.		Mortality.	
	Number.	Value.	Number.	Value.	1917.	1918.
Horses.....	10,855	\$1,302,600.00	10,785	\$1,197,135.00	181	545
Mules and asses.....	2,860	386,100.00	2,179	305,060.00	12	28
Milk cows.....	3,699	277,425.00	4,130	338,660.00	54	171
Other cattle.....	17,119	855,950.00	18,344	990,576.00	255	592
Sheep.....	1,812	19,932.00	995	12,437.50	65	11
Swine.....	5,187	106,333.50	5,468	123,030.00	126	215
Totals.....	41,532	\$2,948,340.50	41,901	\$2,966,898.50	693	1,562

Number of dogs in county March 1, 1917, 683; March 1, 1918, 718.

Number of sheep killed by wolves, year ending March 1, 1918, 1.

Mortality of swine from cholera, year ending March 1, 1917, 16; March 1, 1918, 9.

FARM AND CROP STATISTICS.—PAWNEE COUNTY.

Table showing acres, product and value of field crops in the county for 1917 and 1918.

Crops.	1917.			1918.		
	Acres.	Product.	Value.	Acres.	Product.	Value.
Winter wheat.....bu.	51,126	204,504	\$406,962.96	169,647	1,187,529	\$2,315,681.55
Spring wheat.....bu.						
Corn.....bu.	131,782	1,186,038	1,399,524.84	52,694	316,164	471,084.36
Oats.....bu.	25,492	76,476	53,533.20	18,696	205,656	158,355.12
Rye.....bu.	676	3,380	5,610.80	1,436	14,360	23,119.60
Barley.....bu.	21,566	172,528	177,703.84	10,825	119,075	119,075.00
Emmer ("speltz").....bu.				14	140	114.80
Irish potatoes.....bu.	321	10,272	17,462.40	389	9,336	15,777.84
Sweet potatoes.....bu.	1	77	151.69			
Cowpeas.....tons				2	3	49.50
Flax.....bu.						
Broom corn.....lbs.	360	108,000	14,040.00	25	7,500	900.00
Millet.....tons	338	592	5,328.00	347	521	6,252.00
Sugar beets.....tons	30	420	2,310.00	39	273	2,730.00
Sorghum for syrup.....gals.	70			95		
for seed.....bu.	426	4,260	6,645.60	1,594	14,346	26,970.48
for hay.....tons	10,831	27,078	162,468.00	10,774	21,548	183,158.00
Milo for grain.....bu.	12,136	157,768	227,185.92	7,480	67,320	107,038.80
for stover*.....tons		15,170	60,680.00		13,090	98,175.00
for hay.....tons	115	172	1,204.00	281	703	6,327.00
Kafir for grain.....bu.	34,060	306,540	456,744.60	24,924	124,620	189,422.40
for stover*.....tons		68,120	272,480.00		43,617	348,936.00
for hay.....tons	1,409	4,227	25,362.00	871	1,960	16,660.00
Feterita for grain.....bu.	9,332	111,984	162,376.80	4,637	46,370	70,482.40
for stover*.....tons		13,998	69,990.00		8,115	60,862.50
for hay.....tons	189	283	1,981.00	454	908	8,626.00
Sudan grass.....tons	356	712	7,120.00	1,717	4,722	47,220.00
Jerusalem corn.....tons	20	60	360.00	31	70	595.00
Alfalfa.....tons	6,545	20,290	385,510.00	7,989	21,970	439,400.00
Timothy.....tons	6					
Clover.....tons				10		
Blue grass.....tons						
Sweet clover.....tons	29	† 150	2,550.00	10	‡	
Orchard grass.....tons						
Other tame grasses.....tons	127			10		
Prairie hay.....tons	2,524	1,893	22,716.00	8,743	8,743	131,145.00
Totals.....	309,867		\$3,948,001.65	323,734		\$4,848,158.35

Corn on hand March 1, 1917, 17,583 bushels; March 1, 1918, 72,455 bushels.

Wheat on hand March 1, 1917, 183,435 bushels; March 1, 1918, 23,620 bushels.

Prairie grass for pasture March 1, 1918: Acres fenced, 103,039; acres not fenced, 2,075.

* Forage after harvesting grain. † Product of 1916. ‡ Product of 1917.

SUMMARY.—PAWNEE COUNTY.

Showing quantity and value of farm products in the county for 1917 and 1918.

Products.	1917.		1918.	
	Quantity.	Value.	Quantity.	Value.
Field crops.....acres	309,867	\$3,948,001.65	323,734	\$4,848,158.35
Animals slaughtered or sold for slaughter.....		282,525.00		285,633.00
Poultry and eggs sold.....		89,423.00		81,721.00
Wool clip.....lbs.	1,244	348.32	5,030	2,716.20
Cheese.....lbs.	450	76.50	900	162.00
Butter.....lbs.	170,813	51,243.90	123,620	48,211.80
Condensed milk.....lbs.				
Milk sold.....		35,304.00		71,252.00
Honey and beeswax.....lbs.	300	54.00	935	234.25
Wood marketed.....				
Totals.....		\$4,406,976.37		\$5,338,088.60

Number of cream separators March 1, 1917, 479; March 1, 1918, 659.

Number of silos March 1, 1917, 98; March 1, 1918, 139.

Number of tractors March 1, 1917, 123; March 1, 1918, 179.

PHILLIPS COUNTY.

Organized in 1872; area, 574,785 acres; population, 12,582; rank in population, 54; assessed valuation, \$25,290,925; miles of railroad, main track, 72.20; county seat, Phillipsburg; population, 1,167.

POPULATION AND VALUATION.—PHILLIPS COUNTY.

Table showing total population, by townships and cities, for 1917 and 1918, and the assessed valuation of the municipal townships and cities of 1918.

Townships (and cities).	Population.		Assessed valuation of property, 1918.				
	1917.	1918.	Land.	City lots.	Personal.	Railroad, etc.	Total.
The county.....	13,448	12,582	\$14,401,481	\$1,731,950	\$6,163,126	\$2,994,368	\$25,290,925
Arcade tp.....	415	425	\$610,979	\$6,270	\$189,119	\$320,074	\$1,126,442
Beaver tp.....	393	334	455,628		150,935	934	607,497
Belmont tp.....	485	452	500,672	13,260	240,225	183,545	937,702
Bow Creek tp.....	328	291	482,122		114,855	2,176	599,153
Crystal tp.....	414	424	534,416		193,987	210	728,613
Dayton tp.....	344	363	461,182		124,940	157,601	743,723
Deer Creek tp.....	330	316	838,530		266,880	3,487	1,108,897
Freedom tp.....	393	375	501,800		129,980	1,160	632,940
Glenwood tp.....	450	398	433,614		119,729		553,343
Granite tp.....	585	486	622,452	35,460	230,710	159,207	1,047,829
Greenwood tp.....	332	350	462,684		103,385	786	566,855
Kirwin.....	602	506		296,765	304,180	40,269	641,214
Kirwin tp.....	362	329	796,718	762,415		239,225	1,165,889
Logan.....	782	640		329,135	416,260	37,426	782,821
Logan tp.....	267	240	463,390		108,580	131,070	703,040
Long Island.....	215	510		111,495	178,595	30,116	320,206
Long Island tp.....	514	495	953,802	1,125	323,370	141,138	1,419,435
Mound tp.....		463	572,370	13,200	331,115	343,162	1,259,847
Phillipsburg.....	1,411	1,167		659,885	461,070	40,670	1,161,625
Phillipsburg tp.....	490	459	710,366	37,940	166,285	389,421	1,304,012
Plainview tp.....		230	441,117		100,285		541,402
Agra.....	375	298		113,015	177,921	41,033	331,969
Plum tp.....	460	835			283,870	272,959	1,400,031
Prairie View.....	185	179	843,202		130,700	24,162	231,277
Prairie View tp.....	516	701	551,201		228,230	326,059	1,105,490
Rushville tp.....		281	450,923		84,525	129	535,577
Solomon tp.....		505	782,540	37,985	257,000	192,447	1,269,972
Sumner tp.....		434	498,650		131,795	52	630,497
Towanda tp.....		281	414,269		95,980	1,523	511,772
Valley tp.....		282	582,814		192,150	951	775,915
Walnut tp.....		324	436,040		87,245	22,655	545,940

LIVESTOCK.—PHILLIPS COUNTY.

Table showing number, value and mortality of livestock in the county for 1917 and 1918.

Livestock.	1917.		1918.		Mortality.	
	Number.	Value.	Number.	Value.	1917.	1918.
Horses.....	13,830	\$1,659,600.00	13,416	\$1,489,176.00	132	246
Mules and asses.....	3,976	536,760.00	3,307	462,980.00	16	15
Milk cows.....	10,353	776,475.00	10,259	841,238.00	105	145
Other cattle.....	28,337	1,416,850.00	21,416	1,156,464.00	339	363
Sheep.....	1,210	13,310.00	2,342	29,275.00	3	126
Swine.....	21,181	434,210.50	14,680	330,300.00	1,147	1,114
Totals.....	78,887	\$4,837,205.50	65,420	\$4,309,433.00	1,742	2,009

Number of dogs in county March 1, 1917, 1,653; March 1, 1918, 1,788.

Number of sheep killed by dogs, year ending March 1, 1918, 5.

Mortality of swine from cholera, year ending March 1, 1917, 737; March 1, 1918, 759.

FARM AND CROP STATISTICS.—PHILLIPS COUNTY.

Table showing acres, product and value of field crops in the county for 1917 and 1918.

Crops.	1917.			1918.		
	Acres.	Product.	Value.	Acres.	Product.	Value.
Winter wheat.....bu.	13,938	55,752	\$108,716.40	74,954	449,724	\$863,470.08
Spring wheat.....bu.				9	36	68.76
Corn.....bu.	200,307	400,614	448,687.68	140,874	1,126,992	1,555,248.96
Oats.....bu.	20,031	100,155	62,096.10	17,137	85,685	65,977.45
Rye.....bu.	736			2,448	17,136	28,274.40
Barley.....bu.	18,517	74,068	76,290.04	15,879	142,911	138,623.67
Emmer ("speltz").....bu.				1	4	3.28
Irish potatoes.....bu.	1,116	11,160	16,182.00	1,023	22,506	32,183.58
Sweet potatoes.....bu.						
Cowpeas.....tons						
Flax.....bu.						
Broom corn.....lbs.	30	9,000	1,215.00	115	34,500	3,450.00
Millet.....tons	3,124	1,562	17,182.00	2,004	2,004	24,048.00
Sugar beets.....tons				5	30	285.00
Sorghum for syrup.....gals.	1			85		
for seed.....bu.	467	1,401	2,101.50	1,818	14,544	25,452.00
for hay.....tons	12,339	12,339	111,051.00	11,407	22,814	228,140.00
Milo for grain.....bu.	1,588	1,588	1,985.00	1,875	11,250	17,775.00
for stover*.....tons		1,191	5,955.00		3,281	16,405.00
for hay.....tons	83	62	434.00	38	76	494.00
Kafir for grain.....bu.	9,255	9,255	13,882.50	10,189	30,567	49,824.21
for stover*.....tons		9,255	74,040.00		20,378	122,268.00
for hay.....tons	1,179	1,179	9,432.00	1,006	2,012	17,102.00
Feterita for grain.....bu.	1,338	4,014	6,021.00	2,075	14,525	22,949.50
for stover*.....tons		1,004	6,024.00		4,150	16,600.00
for hay.....tons	190	95	760.00	259	712	4,628.00
Sudan grass.....tons	209	261	2,349.00	389	778	8,558.00
Jerusalem corn.....tons	12	12	96.00	56	112	952.00
Alfalfa.....tons	14,393	30,225	634,725.00	14,186	31,919	670,299.00
Timothy.....tons				75		
Clover.....tons	7			3		
Blue grass.....tons	4					
Sweet clover.....tons	86	† 100	1,600.00	83	‡ 200	3,600.00
Orchard grass.....tons						
Other tame grasses.....tons				57		
Prairie hay.....tons	12,366	6,183	98,928.00	12,382	9,287	148,592.00
Totals.....	311,316		\$1,699,753.22	310,432		\$4,065,271.89

Corn on hand March 1, 1917, 277,668 bushels; March 1, 1918, 105,325 bushels.

Wheat on hand March 1, 1917, 56,095 bushels; March 1, 1918, 7,610 bushels.

Prairie grass for pasture March 1, 1918: Acres fenced, 175,472; acres not fenced, 7,763.

* Forage after harvesting grain. † Product of 1916. ‡ Product of 1917.

SUMMARY.—PHILLIPS COUNTY.

Showing quantity and value of farm products in the county for 1917 and 1918.

Products.	1917.		1918.	
	Quantity.	Value.	Quantity.	Value.
Field crops.....acres	311,316	\$1,699,753.22	310,432	\$4,065,271.89
Animals slaughtered or sold for slaughter.....		995,823.00		1,047,859.00
Poultry and eggs sold.....		202,321.00		187,774.00
Wool clip.....lbs.	520	145.60	4,361	2,354.94
Cheese.....lbs.	200	34.00		
Butter.....lbs.	227,950	68,385.00	204,731	79,845.09
Condensed milk.....lbs.				
Milk sold.....		150,968.00		202,114.00
Honey and beeswax.....lbs.	1,212	218.16	1,656	415.25
Wood marketed.....		21.00		1,490.00
Totals.....		\$3,117,668.98		\$5,587,104.17

Number of cream separators March 1, 1917, 1,463; March 1, 1918, 1,458.

Number of silos March 1, 1917, 147; March 1, 1918, 192.

Number of tractors March 1, 1917, 34; March 1, 1918, 34.

POTTAWATOMIE COUNTY.

Organized in 1856; area, 550,432 acres; population, 15,284; rank in population, 40; assessed valuation, \$36,833,606; miles of railroad, main track, 106.29; county seat, Westmoreland; population, 378.

POPULATION AND VALUATION.—POTTAWATOMIE COUNTY.

Table showing total population, by townships and cities, for 1917 and 1918, and the assessed valuation of the municipal townships and cities of 1918.

Townships (and cities).	Population.		Assessed valuation of property, 1918.				
	1917.	1918.	Land.	City lots.	Personal.	Railroad, etc.	Total.
The county.....	16,141	15,284	\$20,312,501	\$2,172,175	\$10,485,645	\$3,863,335	\$36,833,606
Belvue.....	196	175		\$73,945	\$156,815	\$36,089	\$266,849
Belvue tp.....	538	471	\$1,399,680		370,855	302,171	2,072,706
Blue tp.....		559	1,228,867		630,405	340,484	2,199,756
Blue Valley tp.....		687	1,026,532	76,175	803,105	143,038	2,048,850
Center tp.....		348	745,846	630	340,230	2,316	1,089,022
Clear Creek tp.....		511	762,469	34,880	374,325	108,572	1,280,246
Emmett tp.....		476	665,176	70,150	323,900	143,389	1,202,615
Havensville.....	313	284		100,085	147,145	11,959	259,189
Grant tp.....	722	448	703,297		310,525	101,929	1,115,751
Green tp.....		520	1,066,597	25,525	461,590	55,509	1,609,221
Lincoln tp.....		299	625,392		259,080	1,080	885,552
Lone Tree tp.....		703	797,774	58,815	449,795	238,793	1,545,177
Louisville.....	209	183		45,065	32,260	1,513	78,838
Louisville tp.....	594	556	1,076,973		290,420	7,474	1,374,867
Onaga.....	770	746		376,635	437,555	60,865	875,035
Mill Creek tp.....	583	567	995,038	12,895	509,805	391,782	1,909,520
Pottawatomie tp.....		732	1,210,191		780,290	2,000	1,992,481
Westmoreland.....	410	378		148,450	194,395	640	346,745
Rock Creek tp.....	388	372	750,617	480	268,595	52,619	1,072,311
Shannon tp.....		562	882,691	27,340	288,225	163,810	1,362,066
Sherman tp.....		349	749,249		266,610	1,241	1,017,100
Spring Creek tp.....		287	789,212		223,790	813	1,013,815
St. Clare tp.....		182	666,985	2,580	146,455	186,497	1,002,517
St. George tp.....		719	723,234	44,940	310,345	406,810	1,485,329
St. Marys.....	1,194	1,180		382,600	340,245	71,044	793,889
St. Marys tp.....	535	504	1,088,606		279,665	353,872	1,722,143
Union tp.....		470	822,346		272,935	4,021	1,099,302
Vienna tp.....		314	700,138		342,235	177,858	1,220,231
Wamego.....	1,464	1,467		675,080	603,070	112,261	1,390,411
Wamego tp.....	507	505	835,591	12,595	271,000	382,886	1,502,072

LIVESTOCK.—POTTAWATOMIE COUNTY.

Table showing number, value and mortality of livestock in the county for 1917 and 1918.

Livestock.	1917.		1918.		Mortality.	
	Number.	Value.	Number.	Value.	1917.	1918.
Horses.....	11,348	\$1,361,760.00	11,373	\$1,262,403.00	103	134
Mules and asses.....	2,638	356,130.00	2,149	300,860.00	20	19
Milk cows.....	5,691	426,825.00	8,149	668,218.00	34	176
Other cattle.....	41,310	2,065,500.00	37,672	2,034,288.00	640	916
Sheep.....	1,301	14,311.00	3,672	45,900.00	44	30
Swine.....	24,056	493,148.00	36,318	817,155.00	639	549
Totals.....	86,344	\$4,717,674.00	99,333	\$5,128,824.00	1,480	1,824

Number of dogs in county March 1, 1917, 1,799; March 1, 1918, 1,723.

Number of sheep killed by dogs, year ending March 1, 1917, 10; March 1, 1918, 1.

Mortality of swine from cholera, year ending March 1, 1917, 196; March 1, 1918, 63.

FARM AND CROP STATISTICS.—POTTAWATOMIE COUNTY.

Table showing acres, product and value of field crops in the county for 1917 and 1918.

Crops.	1917.			1918.		
	Acres.	Product.	Value.	Acres.	Product.	Value.
Winter wheat.....bu.	13,029	234,522	\$487,805.76	26,756	428,096	\$873,315.84
Spring wheat.....bu.				66	1,072	2,176.16
Corn.....bu.	102,278	2,556,950	2,761,506.00	86,509	778,581	1,128,942.45
Oats.....bu.	22,927	1,008,788	595,184.92	24,277	509,817	351,773.73
Rye.....bu.	743	11,145	18,500.70	1,183	18,928	28,959.84
Barley.....bu.	64	1,600	1,600.00	119	2,380	2,499.00
Emmer ("speltz").....bu.				7	133	98.42
Irish potatoes.....bu.	1,212	75,144	106,704.48	1,301	48,137	68,354.54
Sweet potatoes.....bu.	314	35,168	50,290.24	200	19,600	37,632.00
Cowpeas.....tons	2	2	32.00	14	21	346.50
Flax.....bu.				6	36	117.00
Broom corn.....lbs.						
Millet.....tons	1,845	4,151	45,661.00	1,960	2,940	35,280.00
Sugar beets.....tons						
Sorghum for syrup.....gals.	69	4,830	3,381.00	124	9,300	10,230.00
for seed.....bu.	271	3,252	5,853.60	202	2,222	4,221.80
for hay.....tons	1,377	4,820	33,740.00	1,399	3,847	30,776.00
Milo for grain.....bu.	68	884	1,237.60	62	744	1,153.20
for stover*.....tons		170	680.00		155	930.00
for hay.....tons	6	18	117.00	17	51	408.00
Kafir for grain.....bu.	3,833	53,662	80,493.00	2,715	43,440	71,676.00
for stover*.....tons		13,415	53,660.00		7,466	59,728.00
for hay.....tons	181	633	5,064.00	273	819	8,190.00
Feterita for grain.....bu.	256	7,168	10,752.00	205	2,460	3,936.00
for stover*.....tons		960	5,760.00		615	3,075.00
for hay.....tons	136	408	2,652.00	98	343	2,401.00
Sudan grass.....tons	139	383	3,830.00	297	743	8,173.00
Jerusalem corn.....tons	1	3	24.00			
Alfalfa.....tons	24,968	74,904	1,348,272.00	26,010	45,518	1,001,396.00
Timothy.....tons	1,044			830		
Clover.....tons	123			136		
Blue grass.....tons	1,382	† 1,850	27,750.00	1,909	† 2,735	54,700.00
Sweet clover.....tons	111			95		
Orchard grass.....tons	13			5		
Other tame grasses.....tons	223			243		
Prairie hay.....tons	31,865	31,865	446,110.00	24,806	12,403	223,254.00
Totals.....	208,480		\$6,096,661.30	201,824		\$4,013,743.48

Corn on hand March 1, 1917, 277,355 bushels; March 1, 1918, 551,446 bushels.

Wheat on hand March 1, 1917, 5,740 bushels; March 1, 1918, 3,661 bushels.

Prairie grass for pasture March 1, 1918: Acres fenced, 196,947; acres not fenced, 390.

* Forage after harvesting grain. † Product of 1916. ‡ Product of 1917.

SUMMARY.—POTTAWATOMIE COUNTY.

Showing quantity and value of farm products in the county for 1917 and 1918.

Products.	1917.		1918.	
	Quantity.	Value.	Quantity.	Value.
Field crops.....acres	208,480	\$6,096,661.30	201,824	\$4,013,743.48
Animals slaughtered or sold for slaughter.....		2,043,733.00		2,856,477.00
Poultry and eggs sold.....		210,970.00		244,302.00
Wool clip.....lbs.	578	161.84	758	409.32
Cheese.....lbs.	215	36.75	40	7.20
Butter.....lbs.	229,031	68,709.30	236,650	92,293.50
Condensed milk.....lbs.				
Milk sold.....		112,480.00		177,467.00
Honey and beeswax.....lbs.	13,191	2,381.48	3,742	936.15
Wood marketed.....		1,842.00		2,141.00
Totals.....		\$8,536,984.47		\$7,387,776.65

Number of cream separators March 1, 1917, 860; March 1, 1918, 1,057.

Number of silos March 1, 1917, 142; March 1, 1918, 126.

Number of tractors March 1, 1917, 58; March 1, 1918, 59.

PRATT COUNTY.

Organized in 1879; area, 465,198 acres; population, 12,136; rank in population, 57; assessed valuation, \$31,645,606; miles of railroad, main track, 115.50; county seat, Pratt; population, 4,250.

POPULATION AND VALUATION.—PRATT COUNTY.

Table showing total population, by townships and cities, for 1917 and 1918, and the assessed valuation of the municipal townships and cities of 1918.

Townships (and cities).	Population.		Assessed valuation of property, 1918.				
	1917.	1918.	Land.	City lots.	Personal.	Railroad, etc.	Total.
The county.....	12,051	12,136	\$17,319,336	\$2,990,426	\$7,524,633	\$3,811,211	\$31,645,606
Banner tp.....	266	260	\$1,022,052	.....	\$258,580	\$273,549	\$1,554,181
Carmi tp.....	409	425	1,137,968	.....	370,968	265,333	1,774,269
Pratt.....	4,358	4,250	.....	\$2,324,567	1,760,206	258,359	4,343,132
Center tp.....	281	330	989,366	.....	214,234	229,939	1,433,539
Elm tp.....	273	316	864,531	.....	236,005	230,342	1,330,878
Gove tp.....	283	317	735,645	.....	202,909	19,590	958,144
Coats.....	407	404	.....	161,510	203,645	25,833	390,988
Grant tp.....	236	241	1,031,339	.....	299,900	209,622	1,540,861
Preston.....	381	399	.....	157,537	155,273	45,292	358,102
Haynesville tp.....	445	473	1,395,098	.....	303,500	397,358	2,095,956
Iuka.....	192	156	.....	63,752	157,458	24,519	245,729
Iuka tp.....	484	551	1,608,781	.....	412,408	138,737	2,159,926
Byers.....	166	210	.....	73,279	118,012	8,492	199,783
Lincoln tp.....	411	347	862,925	.....	279,649	31,399	1,173,973
Logan tp.....	285	311	683,124	.....	225,362	331,452	1,239,938
McClellan tp.....	202	208	474,085	.....	120,845	2,094	597,024
McPherson tp.....	324	321	901,240	.....	280,780	78,004	1,260,024
Naron tp.....	360	343	541,466	8,910	287,263	41,658	879,297
Ninnescah tp.....	251	292	865,330	.....	217,090	.....	1,082,420
Paxon tp.....	353	372	1,011,578	.....	257,650	231,036	1,500,264
Richland tp.....	268	231	1,001,831	.....	228,315	249,956	1,480,102
Saratoga tp.....	166	167	392,103	12,845	82,575	173,234	660,717
Springvale tp.....	334	330	716,983	9,183	299,247	242,638	1,268,051
Valley tp.....	491	489	1,083,891	5,620	262,315	220,412	1,572,238
Sawyer*.....	218	212	.....	79,020	116,650	30,720	226,390
Cullison†.....	207	181	.....	61,005	173,834	51,643	319,680

* In Elm and Paxon townships.

† In Banner and Richland townships.

LIVESTOCK.—PRATT COUNTY.

Table showing number, value and mortality of livestock in the county for 1917 and 1918.

Livestock.	1917.		1918.		Mortality.	
	Number.	Value.	Number.	Value.	1917.	1918.
Horses.....	10,095	\$1,211,400.00	10,117	\$1,122,987.00	173	316
Mules and asses.....	4,286	578,610.00	4,279	599,060.00	27	52
Milk cows.....	3,798	284,850.00	4,340	355,880.00	56	144
Other cattle.....	12,001	600,050.00	13,314	718,956.00	155	463
Sheep.....	717	7,887.00	768	9,600.00	18	6
Swine.....	5,911	121,175.50	8,398	188,955.00	504	482
Totals.....	36,808	\$2,803,972.50	41,216	\$2,995,438.00	933	1,463

Number of dogs in county March 1, 1917, 764; March 1, 1918, 999.

Number of sheep killed by dogs, year ending March 1, 1917, 2.

Mortality of swine from cholera, year ending March 1, 1917, 410; March 1, 1918, 215.

FARM AND CROP STATISTICS.—PRATT COUNTY.

Table showing acres, product and value of field crops in the county for 1917 and 1918.

Crops.	1917.			1918.		
	Acres.	Product.	Value.	Acres.	Product.	Value.
Winter wheat.....bu.	149,615	1,795,380	\$3,752,344.20	215,842	3,021,788	\$6,013,358.12
Spring wheat.....bu.						
Corn.....bu.	97,777	1,173,324	1,372,789.08	46,890	328,230	472,651.20
Oats.....bu.	13,423	241,614	176,378.22	10,354	196,726	149,511.76
Rye.....bu.	1,940	21,340	36,064.60	2,781	33,372	54,396.36
Barley.....bu.	1,549	20,137	19,734.26	994	13,916	13,916.00
Emmer ("speltz").....bu.						
Irish potatoes.....bu.	382	7,640	12,988.00	245	3,675	5,880.00
Sweet potatoes.....bu.	4	320	640.00	6	180	405.00
Cowpeas.....tons				7	11	181.50
Flax.....bu.						
Broom corn.....lbs.						
Millet.....tons	161	201	2,010.00	225	225	2,700.00
Sugar beets.....tons						
Sorghum for syrup.....gals.	5			46		
for seed.....bu.	863	12,082	18,123.00	1,230	9,840	19,680.00
for hay.....tons	6,814	15,332	122,656.00	4,485	8,970	85,215.00
Milo for grain.....bu.	2,824	48,008	63,850.64	1,570	14,130	21,195.00
for stover*.....tons		4,942	24,710.00		1,570	10,990.00
for hay.....tons	84	168	1,176.00	105	210	1,785.00
Kafir for grain.....bu.	35,048	455,624	646,986.08	24,260	242,600	363,900.00
for stover*.....tons		70,096	350,480.00		36,390	200,145.00
for hay.....tons	1,803	4,057	30,428.00	1,418	2,127	15,952.50
Feterita for grain.....bu.	2,921	49,657	65,547.24	1,187	13,057	19,585.50
for stover*.....tons		3,651	14,604.00		1,484	9,646.00
for hay.....tons	228	456	3,648.00	440	880	7,920.00
Sudan grass.....tons	769	2,307	23,070.00	1,389	3,125	37,500.00
Jerusalem corn.....tons				6	9	67.50
Alfalfa.....tons	2,937	6,755	128,345.00	3,125	6,250	125,000.00
Timothy.....tons						
Clover.....tons	1					
Blue grass.....tons						
Sweet clover.....tons	52	†		32	‡	
Orchard grass.....tons	78					
Other tame grasses.....tons						
Prairie hay.....tons	1,127	1,127	15,778.00	1,039	779	12,464.00
Totals.....	320,405		\$6,882,350.32	317,676		\$7,644,045.44

Corn on hand March 1, 1917, 81,037 bushels; March 1, 1918, 242,702 bushels.

Wheat on hand March 1, 1917, 114,430 bushels; March 1, 1918, 106,931 bushels.

Prairie grass for pasture March 1, 1918: Acres fenced, 86,078; acres not fenced, 485.

* Forage after harvesting grain. † Product of 1916. ‡ Product of 1917.

SUMMARY.—PRATT COUNTY.

Showing quantity and value of farm products in the county for 1917 and 1918.

Products.	1917.		1918.	
	Quantity.	Value.	Quantity.	Value.
Field crops.....acres	320,405	\$6,882,350.32	317,676	\$7,644,045.44
Animals slaughtered or sold for slaughter.....		286,961.00		377,192.00
Poultry and eggs sold.....		96,844.00		95,621.00
Wool clip.....lbs.				
Cheese.....lbs.	150	25.50	30	5.40
Butter.....lbs.	202,019	61,325.70	203,441	80,391.99
Condensed milk.....lbs.				
Milk sold.....		48,675.00		56,512.00
Honey and beeswax.....lbs.	1,375	247.50	1,450	362.50
Wood marketed.....		15.00		80.00
Totals.....		\$7,376,444.02		\$8,254,210.33

Number of cream separators March 1, 1917, 583; March 1, 1918, 628.

Number of silos March 1, 1917, 76; March 1, 1918, 85.

Number of tractors March 1, 1917, 76; March 1, 1918, 84.

RAWLINS COUNTY.

Organized in 1881; area, 688,989 acres; population, 6,324; rank in population, 79; assessed valuation, \$10,708,930; miles of railroad, main track, 38.48; county seat, Atwood; population, 752.

POPULATION AND VALUATION.—RAWLINS COUNTY.

Table showing total population, by townships and cities, for 1917 and 1918, and the assessed valuation of the municipal townships and cities of 1918.

Townships (and cities).	Population.		Assessed valuation of property, 1918.				
	1917.	1918.	Land.	City lots.	Personal.	Railroad, etc.	Total.
The county.....	6,177	6,324	\$6,439,660	\$427,300	\$2,870,030	\$971,940	\$10,708,930
Achilles tp.....	271	252	\$275,020	\$20	\$82,750	\$568	\$358,358
Arbor tp.....	105	124	243,720		52,890	243	296,853
Atwood.....	814	752		248,590	261,300	30,369	540,259
Atwood tp.....	201	239	334,230		118,360	84,149	536,739
Beaver tp.....	187	195	239,380		77,430		316,810
Burntwood tp.....	433	498	672,810		242,540		915,350
Celia tp.....	629	612	667,730	46,070	355,800	321,228	1,390,828
Clinton tp.....	272	256	377,910		107,320	543	485,773
Driftwood tp.....	393	431	427,420		226,550		153,970
Elk tp.....	189	184	214,780		98,250		313,030
Grant tp.....	112	115	216,280		53,770	70	270,120
Herndon.....	337	357		110,060	236,120	27,175	373,355
Herndon tp.....	450	475	363,650		149,940	192,949	706,539
Jefferson tp.....	170	147	236,570		53,510		290,080
Laing tp.....	164	234	200,030		82,110	716	282,856
Logan tp.....	148	166	215,810	1,580	95,940	148,642	461,972
Ludell tp.....	306	306	265,380	20,980	203,900	164,325	654,585
Mikesell tp.....	177	176	184,990		51,140	205	236,335
Mirage tp.....	196	224	403,600		71,870	312	475,782
Richland tp.....	294	274	232,990		80,620		313,610
Rotata tp.....	180	176	388,010		94,790		482,800
Union tp.....	149	131	279,350		73,130	446	352,926

LIVESTOCK.—RAWLINS COUNTY.

Table showing number, value and mortality of livestock in the county for 1917 and 1918.

Livestock.	1917.		1918.		Mortality.	
	Number.	Value.	Number.	Value.	1917.	1918.
Horses.....	11,708	\$1,404,960.00	12,339	\$1,369,629.00	197	256
Mules and asses.....	1,189	160,515.00	976	136,640.00	1	7
Milk cows.....	2,883	216,225.00	3,995	327,590.00	72	86
Other cattle.....	16,421	821,050.00	15,123	816,642.00	307	327
Sheep.....	1,240	13,640.00	538	6,725.00	2	26
Swine.....	5,842	119,761.00	5,551	124,897.50	320	130
Totals.....	39,283	\$2,736,151.00	38,522	\$2,782,123.50	899	832

Number of dogs in county March 1, 1917, 902; March 1, 1918, 912.

Number of sheep killed by dogs, year ending March 1, 1917, 1.

Mortality of swine from cholera, year ending March 1, 1917, 222; March 1, 1918, 2.

FARM AND CROP STATISTICS.—RAWLINS COUNTY.

Table showing acres, product and value of field crops in the county for 1917 and 1918.

Crops.	1917.			1918.		
	Acres.	Product.	Value.	Acres.	Product.	Value.
Winter wheat.....bu.	59,179	295,895	\$579,954.20	135,655	813,930	\$1,562,745.60
Spring wheat.....bu.	1,055	3,165	6,013.50	415	1,660	3,154.00
Corn.....bu.	81,355	488,130	566,230.80	49,440	197,760	257,088.00
Oats.....bu.	10,650	74,550	50,694.00	4,571	13,713	10,284.75
Rye.....bu.	92	276	483.00	586	2,930	4,688.00
Barley.....bu.	53,606	268,030	268,030.00	29,454	206,178	189,683.76
Emmer ("speltz").....bu.				15	30	24.00
Irish potatoes.....bu.	375	9,375	12,656.25	529	12,696	19,044.00
Sweet potatoes.....bu.						
Cowpeas.....tons						
Flax.....bu.						
Broom corn.....lbs.				305	106,750	10,675.00
Millet.....tons	1,401	2,101	18,909.00	1,705	2,131	21,310.00
Sugar beets.....tons	4	40	220.00			
Sorghum for syrup.....gals.						
for seed.....bu.	204	816	1,085.28	1,056	8,448	15,628.80
for hay.....tons	12,355	15,444	108,108.00	15,707	23,561	212,049.00
Milo for grain.....bu.	4,141	16,564	23,189.60	2,010	14,070	20,401.50
for stover*.....tons		4,141	16,564.00		2,010	9,045.00
for hay.....tons	142	178	1,068.00	62	78	468.00
Kafir for grain.....bu.	3,910	15,640	23,460.00	5,302	31,812	50,899.20
for stover*.....tons		5,865	41,055.00		7,953	39,765.00
for hay.....tons	631	788	6,304.00	487	974	7,792.00
Feterita for grain.....bu.	2,369	14,214	21,321.00	400	3,200	4,800.00
for stover*.....tons		3,554	21,324.00		300	1,350.00
for hay.....tons	102	153	918.00	153	153	1,147.50
Sudan grass.....tons	467	818	8,180.00	924	1,155	11,550.00
Jerusalem corn.....tons	4	5	40.00	43	86	688.00
Alfalfa.....tons	6,037	15,696	251,136.00	4,932	12,330	246,600.00
Timothy.....tons						
Clover.....tons						
Blue grass.....tons						
Sweet clover.....tons	15	†			†	
Orchard grass.....tons						
Other tame grasses.....tons				15		
Prairie hay.....tons	2,020	1,515	18,180.00	1,313	985	15,760.00
Totals.....	240,114		\$2,045,123.63	255,079		\$2,716,641.11

Corn on hand March 1, 1917, 46,603 bushels; March 1, 1918, 34,840 bushels.

Wheat on hand March 1, 1917, 277,196 bushels; March 1, 1918, 54,851 bushels.

Prairie grass for pasture March 1, 1918: Acres fenced, 275,165; acres not fenced, 24,825.

* Forage after harvesting grain. † Product of 1916. ‡ Product of 1917.

SUMMARY.—RAWLINS COUNTY.

Showing quantity and value of farm products in the county for 1917 and 1918.

Products.	1917.		1918.	
	Quantity.	Value.	Quantity.	Value.
Field crops.....acres	240,114	\$2,045,123.63	255,079	\$2,716,641.11
Animals slaughtered or sold for slaughter.....		226,475.00		341,725.00
Poultry and eggs sold.....		76,931.00		81,451.00
Wool clip.....lbs.	518	145.04	638	344.52
Cheese.....lbs.	100	17.00	195	35.10
Butter.....lbs.	88,019	26,405.70	83,289	32,482.71
Condensed milk.....lbs.				
Milk sold.....		43,190.00		63,372.00
Honey and beeswax.....lbs.	635	114.30	534	133.50
Wood marketed.....		1,008.00		105.00
Totals.....		\$2,419,409.67		\$3,236,289.94

Number of cream separators March 1, 1917, 465; March 1, 1918, 575.

Number of silos March 1, 1917, 14; March 1, 1918, 15.

Number of tractors March 1, 1917, 33; March 1, 1918, 47.

RENO COUNTY.

Organized in 1872; area, 808,651 acres; population, 44,172; rank in population, 7; assessed valuation, \$90,461,622; miles of railroad, main track, 190.36; county seat, Hutchinson; population, 23,401.

POPULATION AND VALUATION.—RENO COUNTY.

Table showing total population, by townships and cities, for 1917 and 1918, and the assessed valuation of the municipal townships and cities of 1918.

Townships (and cities).	Population.		Assessed valuation of property, 1918.				
	1917.	1918.	Land.	City lots.	Personal.	R'ilr'od, etc	Total.
The county.....	43,471	44,172	\$39,803,383	\$17,616,201	\$23,862,940	\$9,179,098	\$90,461,622
Pretty Prairie.....	414	377		\$208,175	\$357,060	\$23,966	\$589,201
Albion tp.....	517	495	\$1,247,929		238,490	228,576	1,714,995
Arlington.....	499	449		183,360	272,090	65,869	521,319
Arlington tp.....	326	337	854,947		172,620	219,480	1,247,047
Bell tp.....		353	939,659		303,480	15,627	1,258,766
Castleton tp.....		584	1,326,694	13,610	386,910	241,023	1,968,237
Partridge.....	250	195		72,435	167,070	84,909	324,414
Center tp.....	424	674	1,330,109		415,050	569,329	2,314,488
Clay tp.....		840	2,045,309	16,980	1,118,710	566,812	3,747,811
Enterprise tp.....		399	1,121,366		303,020	373	1,424,759
Nickerson.....	1,155	1,100		529,056	496,540	98,676	1,124,272
Grant tp.....	559	584	1,622,397		359,610	668,312	2,650,319
Grove tp.....		345	733,427		141,470	132,882	1,007,779
Haven.....	521	469		323,210	427,100	25,593	775,903
Haven tp.....	784	783	2,649,669		706,210	197,644	3,553,523
Hayes tp.....		212	1,189,132		446,120		1,635,252
Huntsville tp.....		482	1,213,297		335,430		1,548,727
Langdon.....	194	172		54,923	99,920	8,741	163,584
Langdon tp.....	421	427	869,906		230,400	286,556	1,386,862
Lincoln tp.....		632	1,687,537	745	356,800	317,066	2,362,148
Buhler.....	429	429		199,897	295,870	23,847	519,614
Little River tp.....	576	583	1,254,475		310,660	171,748	1,736,883
Loda tp.....		368	890,452		263,100	59	1,153,611
Medford tp.....		366	1,333,117		342,060	3,417	1,678,594
Medora tp.....		435	743,953	10,815	153,980	426,467	1,335,215
Turon.....	521	492		178,885	233,330	56,720	468,935
Miami tp.....	390	355	954,419		199,460	467,152	1,621,031
Ninnescah tp.....		297	880,236		131,630	712	1,012,578
North Hays tp.....		420	463,150		99,630		562,780
Plevna.....	179	172		45,865	85,950	15,867	147,682
Plevna tp.....	383	366	831,123		165,070	260,237	1,256,430
South Hutchinson.....	516	547		382,558	256,880	144,014	783,552
Reno tp.....	680	691	1,903,382	843	412,910	805,160	3,122,295
Roscoe tp.....		341	883,076		275,610	760	1,159,446
Salt Creek tp.....		674	2,030,073		496,340	2,087	2,528,500
Sumner tp.....		548	1,228,665		146,890	437	1,375,992
Sylvia.....	480	500		260,030	286,130	64,187	610,347
Sylvia tp.....	447	441	829,334		276,930	230,727	1,336,991
Troy tp.....		315	847,956		297,950	190	1,146,096
Valley tp.....		535	1,815,229		407,290	615,440	2,837,959
Walnut tp.....		808	1,199,751		434,180	2,228	1,636,159
Westminster tp.....		812	1,167,204	48,116	375,680	323,858	1,914,858
Yoder tp.....		460	1,716,410	13,498	602,600	233,666	2,566,174
Hutchinson:							
First ward.....	4,205	*					
Mules and asses.....	3,730						
Third ward.....	2,608						
Fourth ward.....	2,607						
Fifth ward.....	3,710						
Sixth ward.....	5,711						
Totals.....	108,141	23,401	\$6,619,592.50	15,073,100	9,978,710	1,578,684	26,630,494

* Not available by wards for 1918.

LIVESTOCK.—RENO COUNTY.

Table showing number, value and mortality of livestock in the county for 1917 and 1918.

Livestock.	1917.		1918.		Mortality.	
	Number.	Value.	Number.	Value.	1917.	1918.
Horses.....	19,499	\$2,339,880.00	19,017	\$2,110,887.00	499	828
Mules and asses.....	6,731	908,685.00	5,972	836,080.00	62	74
Milk cows.....	11,797	884,775.00	13,286	1,089,452.00	211	526
Other cattle.....	37,783	1,889,150.00	40,175	2,169,450.00	864	1,814
Sheep.....	6,914	76,054.00	11,973	149,662.50	128	252
Swine.....	25,417	521,048.50	25,519	574,177.50	1,005	1,714
Totals.....	108,141	\$6,619,592.50	115,942	\$6,929,709.00	2,769	5,208

Number of dogs in county March 1, 1917, 2,677; March 1, 1918, 2,552.

Number of sheep killed by dogs, year ending March 1, 1917, 10; March 1, 1918, 32.

Number of sheep killed by wolves, year ending March 1, 1917, 1; March 1, 1918, 22.

Mortality of swine from cholera, year ending March 1, 1917, 643; March 1, 1918, 740.

FARM AND CROP STATISTICS.—RENO COUNTY.

Table showing acres, product and value of field crops in the county for 1917 and 1918.

Crops.	1917.			1918.		
	Acres.	Product.	Value.	Acres.	Product.	Value.
Winter wheat.....bu.	155,113	1,861,356	\$3,908,847.60	259,326	3,889,890	\$7,779,780.00
Spring wheat.....bu.				20	260	514.80
Corn.....bu.	208,018	2,496,216	2,970,497.04	130,492	1,174,428	1,679,432.04
Oats.....bu.	43,371	1,084,275	715,621.50	33,838	778,274	583,705.50
Rye.....bu.	8,041	88,451	144,175.13	14,754	206,556	320,161.80
Barley.....bu.	2,352	37,632	37,632.00	2,381	42,858	45,000.90
Emmer ("speltz").....bu.						
Irish potatoes.....bu.	1,068	56,604	84,906.00	1,212	24,240	38,784.00
Sweet potatoes.....bu.	170	13,600	22,032.00	99	2,475	4,950.00
Cowpeas.....tons	70	87	1,392.00	48	72	1,188.00
Flax.....bu.	60	360	972.00			
Broom corn.....lbs.	1,090	381,500	53,410.00	966	289,800	34,776.00
Millet.....tons	725	1,088	11,968.00	417	834	10,008.00
Sugar beets.....tons	3	30	165.00	5	30	285.00
Sorghum for syrup.....gals.	63	1,260	882.00	142	3,550	3,905.00
for seed.....bu.	951	13,314	22,633.80	1,487	17,844	35,688.00
for hay.....tons	7,591	22,773	113,865.00	6,897	22,415	156,905.00
Milo for grain.....bu.	1,506	22,590	31,626.00	1,639	24,585	38,106.75
for stover*.....tons		3,012	12,048.00		2,868	14,340.00
for hay.....tons	69	155	930.00	81	182	1,274.00
Kafir for grain.....bu.	17,271	259,065	362,691.00	14,330	171,960	275,136.00
for stover*.....tons		34,542	155,439.00		32,243	161,215.00
for hay.....tons	2,224	6,116	36,696.00	2,092	5,230	36,610.00
Peterita for grain.....bu.	1,250	15,000	22,500.00	749	8,988	13,931.40
for stover*.....tons		3,750	15,000.00		1,685	9,267.50
for hay.....tons	113	339	1,864.50	118	354	2,655.00
Sudan grass.....tons	880	3,080	24,640.00	2,541	6,353	63,530.00
Jerusalem corn.....tons	46	127	762.00	180	450	3,150.00
Alfalfa.....tons	20,236	58,684	1,056,312.00	24,514	67,414	1,348,280.00
Timothy.....tons	15					
Clover.....tons	15					
Blue grass.....tons	70					
Sweet clover.....tons	316	† 400	6,400.00	362	‡ 400	8,000.00
Orchard grass.....tons	2			1		
Other tame grasses.....tons	63			90		
Prairie hay.....tons	9,541	9,541	114,492.00	10,509	10,509	168,144.00
Totals.....	482,303		\$9,930,399.57	509,290		\$12,838,723.69

Corn on hand March 1, 1917, 211,080 bushels; March 1, 1918, 543,279 bushels.

Wheat on hand March 1, 1917, 94,806 bushels; March 1, 1918, 137,232 bushels.

Prairie grass for pasture March 1, 1918: Acres fenced, 141,885; acres not fenced, 3,552.

* Forage after harvesting grain. † Product of 1916. ‡ Product of 1917.

SUMMARY.—RENO COUNTY.

Showing quantity and value of farm products in the county for 1917 and 1918.

Products.	1917.		1918.	
	Quantity.	Value.	Quantity.	Value.
Field crops.....acres	482,303	\$9,930,399.57	509,290	\$12,838,723.69
Animals slaughtered or sold for slaughter.....		956,116.00		1,413,237.00
Poultry and eggs sold.....		263,830.00		268,845.00
Wool clip.....lbs.	8,165	2,286.20	9,399	5,075.46
Cheese.....lbs.	1,080	213.60	2,041	367.38
Butter.....lbs.	1,999,731	647,931.45	2,558,967	1,064,409.69
Condensed milk.....lbs.				
Milk sold.....		241,026.00		335,991.00
Honey and beeswax.....lbs.	20,570	3,788.60	20,822	5,226.10
Wood marketed.....		884.00		2,400.00
Totals.....		\$12,046,475.42		\$15,934,275.32

Number of cream separators March 1, 1917, 1,606; March 1, 1918, 1,995.

Number of silos March 1, 1917, 391; March 1, 1918, 435.

Number of tractors March 1, 1917, 138; March 1, 1918, 198.

REPUBLIC COUNTY.

Organized in 1868; area, 460,074 acres; population, 16,408; rank in population, 37; assessed valuation, \$44,856,652; miles of railroad, main track, 139.59; county seat, Belleville; population, 2,246.

POPULATION AND VALUATION.—REPUBLIC COUNTY.

Table showing total population, by townships and cities, for 1917 and 1918, and the assessed valuation of the municipal townships and cities of 1918.

Townships (and cities).	Population.		Assessed valuation of property, 1918.				
	1917.	1918.	Land.	City lots.	Personal.	Railroad, etc.	Total.
The county.....	17,005	16,408	\$26,588,705	\$2,514,790	\$10,027,640	\$5,725,517	\$44,856,652
Narka.....	261	219		\$98,380	\$150,095	\$42,013	\$290,488
Albion tp.....	586	576	\$1,522,440		525,680	292,241	2,340,361
Beaver tp.....	547	555	1,257,415	24,205	488,360	257,624	2,027,604
Belleville tp.....	645	596	1,444,000		390,555	357,523	2,192,078
Republic.....	473	458		201,400	350,800	20,853	573,053
Big Bend tp.....	622	580	1,416,240	6,240	540,760	473,932	2,437,172
Courtland.....	431	400		199,015	207,685	71,637	478,737
Courtland tp.....	612	619	1,488,775		387,570	521,009	2,397,354
Agenda.....	232	225		107,850	149,570	46,803	304,223
Elk Creek tp.....	496	502	1,273,880		316,325	261,158	1,851,363
Munden.....	264	208		87,515	101,805	28,209	217,529
Fairview tp.....	567	585	1,349,170	840	317,090	481,425	2,148,525
Farmington tp.....	536	543	1,186,015	735	331,470	82,443	1,600,663
Freedom tp.....	561	587	1,446,440		412,465	147,288	2,006,193
Wayne.....	140	121		70,705	426,345	336,809	1,903,804
Grant tp.....	505	508	1,069,945				
Jefferson tp.....	504	513	1,140,795		253,580	231,703	1,626,078
Liberty tp.....	630	576	1,446,030		358,420	1,291	1,805,741
Talmo.....	150	106			247,570	21,347	1,310,482
Lincoln tp.....	514	504	1,041,565				
Norway.....	110	118		31,965	426,080	210,911	1,924,896
Norway tp.....	564	579	1,255,940				
Cuba.....	479	440		187,680	203,105	23,224	414,009
Richland tp.....	576	517	1,301,775		388,710	372,973	2,063,458
Rose Creek tp.....	615	665	1,418,555		393,270	415,420	2,227,245
Scandia.....	607	588		248,370	241,410	42,864	532,644
Scandia tp.....	587	548	1,348,260		368,785	492,334	2,209,379
Union tp.....	621	616	1,588,225		436,200	170,158	2,194,583
Washington tp.....	580	581	1,353,160	7,880	419,545	118,262	1,898,847
White Rock tp.....	524	529	1,240,080	2,440	357,200	2,784	1,602,504
Belleville*.....	2,466	2,246		1,239,170	837,190	201,279	2,277,639

* In Belleville and Freedom townships.

LIVESTOCK.—REPUBLIC COUNTY.

Table showing number, value and mortality of livestock in the county for 1917 and 1918.

Livestock.	1917.		1918.		Mortality.	
	Number.	Value.	Number.	Value.	1917.	1918.
Horses.....	14,973	\$1,796,760.00	14,554	1,615,494.00	140	437
Mules and asses.....	3,530	476,550.00	2,987	418,180.00	23	26
Milk cows.....	8,430	632,250.00	10,435	855,670.00	74	187
Other cattle.....	24,965	1,248,250.00	23,543	1,271,322.00	310	1,195
Sheep.....	318	3,498.00	533	6,662.50		13
Swine.....	32,189	659,874.50	35,104	789,840.00	859	1,669
Totals.....	84,405	\$4,817,182.50	87,156	\$4,957,168.50	1,406	3,527

Number of dogs in county March 1, 1917, 2,152; March 1, 1918, 2,147.

Number of sheep killed by dogs, year ending March 1, 1918, 7.

Number of sheep killed by wolves, year ending March 1, 1918, 20.

Mortality of swine from cholera, year ending March 1, 1917, 607; March 1, 1918, 1,221.

FARM AND CROP STATISTICS.—REPUBLIC COUNTY.

Table showing acres, product and value of field crops in the county for 1917 and 1918.

Crops.	1917.			1918.		
	Acres.	Product.	Value.	Acres.	Product.	Value.
Winter wheat.....bu.	1,287	6,435	\$13,513.50	25,569	204,552	\$398,876.40
Spring wheat.....bu.	164	820	1,672.80	2,343	14,058	27,131.94
Corn.....bu.	180,714	1,987,854	2,246,275.02	149,816	599,264	874,925.44
Oats.....bu.	53,508	1,391,508	820,812.72	49,760	845,920	566,766.40
Rye.....bu.	261	2,349	4,110.75	1,904	20,944	33,510.40
Barley.....bu.	3,218	57,924	57,924.00	5,939	89,085	90,866.70
Emmer ("speltz").....bu.				5	75	54.00
Irish potatoes.....bu.	1,236	51,912	75,272.40	1,387	15,257	23,953.49
Sweet potatoes.....bu.						
Cowpeas.....tons				1	2	33.00
Flax.....bu.						
Broom corn.....lbs.	36	9,900	1,386.00	56	14,000	1,400.00
Millet.....tons	1,183	1,183	11,830.00	1,126	1,126	13,512.00
Sugar beets.....tons						
Sorghum for syrup.....gals.	11	440	308.00	95	3,800	4,180.00
for seed.....bu.	406	3,654	6,394.50	939	9,390	17,841.00
for hay.....tons	4,272	6,408	57,672.00	3,745	4,681	42,129.00
Milo for grain.....bu.	12			346	3,460	5,536.00
for stover*.....tons		13	65.00		519	3,114.00
for hay.....tons	13	26	182.00	14	21	168.00
Kafir for grain.....bu.	1,707	10,242	15,363.00	974	4,870	8,279.00
for stover*.....tons		1,707	12,802.50		1,218	7,917.00
for hay.....tons	56	112	1,064.00	84	105	945.00
Feterita for grain.....bu.	63	630	945.00	643	6,430	9,966.50
for stover*.....tons		79	395.00		965	5,307.50
for hay.....tons	54	67	469.00	295	590	4,130.00
Sudan grass.....tons	74	111	999.00	547	821	8,210.00
Jerusalem corn.....tons	3	6	57.00	3	4	36.00
Alfalfa.....tons	35,389	70,778	1,274,004.00	39,114	58,671	1,232,091.00
Timothy.....tons	307			274		
Clover.....tons	38			69		
Blue grass.....tons	26			172		
Sweet clover.....tons	131	† 750	11,250.00	295	‡ 700	14,000.00
Orchard grass.....tons	60			40		
Other tame grasses.....tons	137			176		
Prairie hay.....tons	9,178	4,589	64,246.00	9,040	4,520	81,360.00
Totals.....	293,544		\$4,679,013.19	294,771		\$3,476,239.77

Corn on hand March 1, 1917, 587,727 bushels; March 1, 1918, 581,789 bushels.

Wheat on hand March 1, 1917, 87,531 bushels; March 1, 1918, 22,201 bushels.

Prairie grass for pasture March 1, 1918: Acres fenced, 91,925; acres not fenced, 724.

* Forage after harvesting grain. † Product of 1916. ‡ Product of 1917.

SUMMARY.—REPUBLIC COUNTY.

Showing quantity and value of farm products in the county for 1917 and 1918.

Products.	1917.		1918.	
	Quantity.	Value.	Quantity.	Value.
Field crops.....acres	293,544	\$4,679,013.19	294,771	\$3,476,239.77
Animals slaughtered or sold for slaughter.....		1,479,971.00		2,155,470.00
Poultry and eggs sold.....		250,338.00		289,834.00
Wool clip.....lbs.	775	217.00	1,846	996.84
Cheese.....lbs.	200	34.00	400	72.00
Butter.....lbs.	343,080	107,179.89	205,260	80,051.40
Condensed milk.....lbs.				
Milk sold.....		126,006.00		191,772.00
Honey and beeswax.....lbs.	21,748	3,917.44	14,180	3,545.00
Wood marketed.....		308.00		1,230.00
Totals.....		\$6,646,984.52		\$6,199,211.01

Number of cream separators March 1, 1917, 1,155; March 1, 1918, 1,291.

Number of silos March 1, 1917, 81; March 1, 1918, 91.

Number of tractors March 1, 1917, 43; March 1, 1918, 46.

RICE COUNTY.

Organized in 1871; area, 463,209 acres; population, 14,217; rank in population, 48; assessed valuation, \$40,737,371; miles of railroad, main track, 151.46; county seat, Lyons; population, 2,435.

POPULATION AND VALUATION.—RICE COUNTY.

Table showing total population, by townships and cities, for 1917 and 1918, and the assessed valuation of the municipal townships and cities of 1918.

Townships (and cities).	Population.		Assessed valuation of property, 1918.				
	1917.	1918.	Land.	City lots.	Personal.	Railroad, etc.	Total.
The county.....	14,383	14,217	\$22,405,574	\$3,144,637	\$9,396,022	\$5,791,138	\$40,737,371
Lyons.....	2,610	2,435		\$1,374,240	\$1,319,190	\$183,448	\$2,876,878
Atlanta tp.....	454	435	\$1,467,961		350,730	313,080	2,131,771
Bell tp.....	191	191	590,060		155,590	13,136	758,786
Center tp.....	403	452	1,266,229		335,185	5,805	1,607,219
Frederick.....	145	101					
Eureka tp.....	277	373	1,266,435	42,110	213,735	277,506	1,799,786
Bushon.....	305	276					
Farmer tp.....	411	383	1,288,357	134,035	484,724	274,553	2,181,669
Galt tp.....	376	391	1,000,104	4,370	250,993	493,853	1,749,320
Harrison tp.....	338	372	1,226,469	200	265,514	550,747	2,042,930
Chase.....	250	186					
Lincoln tp.....	593	332	1,280,489	73,575	417,571	256,542	2,023,177
Mitchell tp.....	482	500	1,117,762	24,650	280,393	341,756	1,764,561
Odessa tp.....	343	308	788,258	10	163,110	64,386	1,015,764
Pioneer tp.....	405	401	1,107,967		197,287	250,087	1,555,341
Raymond tp.....	502	483	1,077,230	49,865	298,841	306,495	1,732,431
Rockville tp.....	385	385	974,244		372,198	565	1,347,007
Sterling.....	1,830	1,960		918,395	1,235,820	104,886	2,259,101
Sterling tp.....	483	468	1,686,457		414,030	506,182	2,606,669
Little River.....	605	634					
Union tp.....	467	509	1,245,024	281,515	810,190	325,519	2,662,248
Alden.....	317	274					
Valley tp.....	295	378	831,160	88,185	479,770	245,079	1,644,194
Geneseo.....	536	500					
Victoria tp.....	311	464	1,136,586	137,937	354,160	722,729	2,351,412
Washington tp.....	591	567	1,806,111	1,605	463,195	437,001	2,707,912
Wilson tp.....	478	459	1,248,671	13,945	533,796	117,783	1,914,195

LIVESTOCK.—RICE COUNTY.

Table showing number, value and mortality of livestock in the county for 1917 and 1918.

Livestock.	1917.		1918.		Mortality.	
	Number.	Value.	Number.	Value.	1917.	1918.
Horses.....	11,233	\$1,347,960.00	11,146	\$1,237,206.00	232	301
Mules and asses.....	4,032	544,320.00	3,705	518,700.00	25	37
Milk cows.....	5,607	420,525.00	6,531	535,542.00	100	109
Other cattle.....	20,945	1,047,250.00	20,780	1,122,120.00	381	714
Sheep.....	1,327	14,597.00	2,903	36,287.50	8	127
Swine.....	14,232	291,756.00	17,762	399,645.00	342	648
Totals.....	57,376	\$3,666,408.00	62,827	\$3,849,500.50	1,088	1,936

Number of dogs in county March 1, 1917, 1,217; March 1, 1921.

Number of sheep killed by dogs, year ending March 1, 1917, 51; March 1, 1918, 10.

Number of sheep killed by wolves, year ending March 1, 1918, 2.

Mortality of swine from cholera, year ending March 1, 1917, 167; March 1, 1918, 217

FARM AND CROP STATISTICS.—RICE COUNTY.

Table showing acres, product and value of field crops in the county for 1917 and 1918.

Crops.	1917.			1918.		
	Acres.	Product.	Value.	Acres.	Product.	Value.
Winter wheat.....bu.	121,818	1,583,634	\$3,325,631.40	173,669	2,605,035	\$5,210,070.00
Spring wheat.....bu.				15	195	386.10
Corn.....bu.	111,708	1,340,496	1,528,165.44	66,593	532,744	761,823.92
Oats.....bu.	16,495	346,395	221,692.80	16,685	517,235	387,926.25
Rye.....bu.	1,986	23,832	38,846.16	3,438	48,132	74,604.60
Barley.....bu.	2,057	32,912	32,912.00	1,350	33,750	35,437.50
Emmer ("speltz").....bu.						
Irish potatoes.....bu.	469	26,264	39,396.00	547	11,487	18,723.81
Sweet potatoes.....bu.	9	864	1,512.00	3	171	342.00
Cowpeas.....tons	4	5	80.00	22	33	544.50
Flax.....bu.						
Broom corn.....lbs.	1,367	410,100	59,464.50	1,227	368,100	46,012.50
Millet.....tons	451	902	9,020.00	412	824	9,888.00
Sugar beets.....tons	1	10	55.00			
Sorghum for syrup.....gals.	5	100	70.00	30	900	990.00
for seed.....bu.	448	4,032	6,652.80	789	9,468	17,989.20
for hay.....tons	3,475	10,425	62,550.00	2,821	5,642	39,494.00
Milo for grain.....bu.	253	2,530	3,542.00	492	5,904	9,446.40
for stover*.....tons		506	2,024.00		984	5,904.00
for hay.....tons	106	212	1,484.00	65	146	1,095.00
Kafir for grain.....bu.	7,941	111,174	155,643.60	6,349	76,188	121,900.80
for stover*.....tons		17,867	71,468.00		14,285	85,710.00
for hay.....tons	1,453	2,906	20,342.00	938	2,345	17,587.50
Feterita for grain.....bu.	669	8,028	11,640.60	296	3,848	5,772.00
for stover*.....tons		1,673	6,692.00		740	3,700.00
for hay.....tons	55	165	1,155.00	46	138	966.00
Sudan grass.....tons	422	1,055	9,495.00	1,181	3,543	35,430.00
Jerusalem corn.....tons	3	6	42.00			
Alfalfa.....tons	16,514	47,891	909,929.00	17,332	47,663	1,000,923.00
Timothy.....tons	20			26		
Clover.....tons	15			5		
Blue grass.....tons		†			‡ 100	2,000.00
Sweet clover.....tons	60			99		
Orchard grass.....tons	10			35		
Other tame grasses.....tons				127		
Prairie hay.....tons	9,887	9,887	118,644.00	4,781	4,781	71,715.00
Totals.....	297,701		\$6,638,149.30	299,373		\$7,966,382.08

Corn on hand March 1 1917, 130,545 bushels; March 1, 1918, 208,927 bushels.

Wheat on hand March 1, 1917, 98,289 bushels; March 1, 1918, 76,205 bushels.

Prairie grass for pasture March 1, 1918: Acres fenced, 74,487; acres not fenced, 1,059.

* Forage after harvesting grain. † Product of 1916. ‡ Product of 1917.

SUMMARY.—RICE COUNTY.

Showing quantity and value of farm products in the county for 1917 and 1918.

Products.	1917.		1918.	
	Quantity.	Value.	Quantity.	Value.
Field crops.....acres	297,701	\$6,638,149.30	299,373	\$7,966,382.08
Animals slaughtered or sold for slaughter.....		841,602.00		1,382,673.00
Poultry and eggs sold.....		158,931.00		173,705.00
Wool clip.....lbs.	770	215.60	1,193	644.22
Cheese.....lbs.				
Butter.....lbs.	272,785	82,135.50	229,513	89,811.15
Condensed milk.....lbs.				
Milk sold.....		88,907.00		129,535.00
Honey and beeswax.....lbs.	4,424	797.32	14,981	3,749.85
Wood marketed.....		346.00		276.00
Totals.....		\$7,811,083.72		\$9,746,776.30

Number of cream separators March 1, 1917, 906; March 1, 1918, 1,039.

Number of silos March 1, 1917, 170; March 1, 1918, 208.

Number of tractors March 1, 1917, 56; March 1, 1918, 59.

RILEY COUNTY.

Organized in 1855; area, 399,829 acres; population, 17,682; rank in population, 34; assessed valuation, \$36,255,332; miles of railroad, main track, 100.52; county seat, Manhattan; population, 7,959.

POPULATION AND VALUATION.—RILEY COUNTY.

Table showing total population, by townships and cities, for 1917 and 1918, and the assessed valuation of the municipal townships and cities of 1918.

Townships (and cities).	Population.		Assessed valuation of property, 1918.				
	1917.	1918.	Land.	City lots.	Personal.	Railroad, etc.	Total.
The county	16,083	17,682	\$16,121,280	\$6,192,085	\$8,960,140	\$4,981,827	\$36,255,332
Ashland tp.	258	270	\$859,652		\$246,715		\$1,106,367
Leonardville.	337	331		\$155,800	203,300	\$15,621	374,721
Bala tp.	667	679	1,365,258	12,600	555,695	229,727	2,163,280
Center tp.	312	313	650,412		358,955	558	1,009,925
Fancy Creek tp.	400	390	798,755	1,960	316,585	59,822	1,177,122
Grant tp.	442	460	792,653	14,625	231,540	237,157	1,275,975
Randolph.	379	388		169,835	321,390	224	491,449
Jackson tp.	381	311	859,608	14,210	379,520	197,881	1,451,219
Riley.	331	342		119,370	173,535	28,187	321,092
Madison tp.	719	686	1,729,080		453,880	403,941	2,586,901
Manhattan.	6,811	7,959		5,168,420	2,420,155	553,315	8,141,890
Manhattan tp.	1,250	1,265	2,029,290	21,415	493,660	955,011	3,499,376
May Day tp.	447	425	739,561		321,131	1,514	1,062,205
Army City.	*	304		250,260	117,620		367,880
Ogden.	257	393	1,140	180,915	144,335	56,184	81,434
Ogden tp.	376	443	1,004,512		358,925	792,091	2,155,528
Seven Mile tp.	334	382	789,228		229,290	573	1,019,091
Sherman tp.	458	450	697,313		292,810	361,257	1,351,380
Swede Creek tp.	753	714	1,094,876	61,115	667,790	289,658	2,113,439
Wild Cat tp.	625	655	1,068,034	21,560	343,430	493,740	1,926,764
Zeandale tp.	546	522	1,643,048		329,880	305,366	2,278,294

* Not reported separately from township in 1917.

LIVESTOCK.—RILEY COUNTY.

Table showing number, value and mortality of livestock in the county for 1917 and 1918.

Livestock.	1917.		1918.		Mortality.	
	Number.	Value.	Number.	Value.	1917.	1918.
Horses	8,394	\$1,007,280.00	7,985	\$886,335.00	76	71
Mules and asses	1,951	263,385.00	1,679	235,060.00	32	7
Milk cows.	3,478	260,850.00	4,479	367,278.00	41	64
Other cattle.	30,493	1,524,650.00	24,756	1,336,824.00	444	739
Sheep.	825	9,075.00	981	12,262.50	5	30
Swine.	23,885	489,642.50	26,269	591,052.50	1,133	1,220
Totals.	69,026	\$3,554,882.50	66,149	\$3,428,812.00	1,731	2,131

Number of dogs in county March 1, 1917, 1,305; March 1, 1918, 1,076.

Number of sheep killed by dogs, year ending March 1, 1917, 3.

Number of sheep killed by wolves, year ending March 1, 1917, 1; March 1, 1918, 5.

Mortality of swine from cholera, year ending March 1, 1917, 86; March 1, 1918, 295.

FARM AND CROP STATISTICS.—RILEY COUNTY.

Table showing acres, product and value of field crops in the county for 1917 and 1918.

Crops.	1917.			1918.		
	Acres.	Product.	Value.	Acres.	Product.	Value.
Winter wheat.....bu.	7,942	127,072	\$256,685.44	24,208	387,328	\$790,149.12
Spring wheat.....bu.				20	260	525.20
Corn.....bu.	81,894	2,047,350	2,170,191.00	64,517	580,653	847,753.38
Oats.....bu.	21,740	847,860	500,237.40	17,819	427,656	295,082.64
Rye.....bu.	579	9,264	15,470.88	1,324	21,184	32,411.52
Barley.....bu.	50	1,050	1,050.00	100	1,400	1,470.00
Emmer ("speltz").....bu.						
Irish potatoes.....bu.	764	45,840	66,009.60	606	24,240	34,663.20
Sweet potatoes.....bu.	68	7,616	10,510.08	48	3,744	7,488.00
Cowpeas.....tons	2	2	32.00			
Flax.....bu.						
Broom corn.....lbs.	10	2,750	385.00			
Millet.....tons	988	1,976	18,772.00	612	918	11,016.00
Sugar beets.....tons						
Sorghum for syrup.....gals.	30	1,800	1,260.00	25	1,500	1,650.00
for seed.....bu.	130	2,080	3,744.00	328	2,624	4,985.60
for hay.....tons	1,939	6,786	47,502.00	1,685	3,791	30,328.00
Milo for grain.....bu.	15	180	225.00	70	630	1,071.00
for stover*.....tons		35	152.00		175	1,225.00
for hay.....tons	8	24	156.00	2	6	51.00
Kafir for grain.....bu.	2,720	35,360	52,332.80	2,291	18,328	32,074.00
for stover*.....tons		8,840	53,040.00		5,155	41,240.00
for hay.....tons	511	2,044	14,308.00	159	517	4,653.00
Feterita for grain.....bu.	104	1,560	2,184.00	234	1,638	2,538.90
for stover*.....tons		208	1,040.00		702	4,212.00
for hay.....tons	52	156	1,092.00	81	284	2,272.00
Sudan grass.....tons	37	83	830.00	87	283	3,113.00
Jerusalem corn.....tons	1	4	28.00	11	36	324.00
Alfalfa.....tons	21,046	58,929	1,001,793.00	20,545	35,954	826,942.00
Timothy.....tons				1		
Clover.....tons	91					
Blue grass.....tons	314	† 500	7,500.00	180	‡ 200	4,000.00
Sweet clover.....tons	62			108		
Orchard grass.....tons	12			14		
Other tame grasses.....tons	24			91		
Prairie hay.....tons	14,239	14,239	199,346.00	13,879	10,409	187,362.00
Totals.....	155,372		\$4,425,876.20	149,045		\$3,168,600.56

Corn on hand March 1 1917, 222,673 bushels; March 1, 1918, 318,916 bushels.

Wheat on hand March 1, 1917, 10,240 bushels; March 1, 1918, 17,033 bushels.

Prairie grass for pasture March 1, 1918; Acres fenced, 131,638; acres not fenced, 148.

* Forage after harvesting grain. † Product of 1916. ‡ Product of 1917.

SUMMARY.—RILEY COUNTY.

Showing quantity and value of farm products in the county for 1917 and 1918.

Products.	1917.		1918.	
	Quantity.	Value.	Quantity.	Value.
Field crops.....acres	155,372	\$4,425,876.20	149,045	\$3,168,600.56
Animals slaughtered or sold for slaughter.....		1,532,747.00		2,100,852.00
Poultry and eggs sold.....		169,465.00		189,094.00
Wool clip.....lbs.	1,935	541.80	388	209.52
Cheese.....lbs.	400	68.00	410	73.80
Butter.....lbs.	161,572	48,471.60	224,702	89,606.25
Condensed milk.....lbs.				
Milk sold.....		93,721.00		129,372.00
Honey and beeswax.....lbs.	14,435	2,621.90	12,002	3,000.50
Wood marketed.....		1,328.00		1,372.00
Totals.....		\$6,274,840.50		\$5,682,180.63

Number of cream separators March 1, 1917, 563; March 1, 1918, 689.

Number of silos March 1, 1917, 135; March 1, 1918, 142.

Number of tractors March 1, 1917, 84; March 1, 1918, 41.

ROOKS COUNTY.

Organized in 1872; area, 573,972 acres; population, 10,127; rank in population, 67; assessed valuation, \$21,025,808; miles of railroad, main track, 49.00; county seat, Stockton; population, 1,194.

POPULATION AND VALUATION.—ROOKS COUNTY.

Table showing total population, by townships and cities, for 1917 and 1918, and the assessed valuation of the municipal townships and cities of 1918.

Townships (and cities).	Population.		Assessed valuation of property, 1918.				
	1917.	1918.	Land.	City lots.	Personal.	Railroad, etc.	Total.
The county.....	11,010	10,127	\$12,557,216	\$1,656,680	\$5,347,075	\$1,464,837	\$21,025,808
Alcona tp.....	327	266	\$411,500	.....	\$83,905	\$312	\$495,717
Ash Rock tp.....	349	329	670,317	.....	189,250	889	860,456
Belmont tp.....	505	476	521,969	\$34,895	150,935	.....	707,799
Bow Creek tp.....	219	235	448,030	.....	121,515	.....	569,545
Corning tp.....	264	234	479,550	.....	137,560	1,465	618,575
Farmington tp.....	261	254	542,300	.....	131,355	79	673,734
Greenfield tp.....	221	214	447,070	.....	101,545	323	548,943
Hobart tp.....	214	181	463,000	.....	75,040	1,605	539,645
Iowa tp.....	302	310	481,200	.....	142,990	157,513	781,703
Laanark tp.....	253	228	524,882	.....	139,105	1,709	665,696
Logan tp.....	545	552	564,439	36,900	235,955	170,936	1,008,230
Woodston.....	385	340	.....	127,520	275,760	24,664	427,944
Lowell tp.....	345	357	509,800	.....	183,545	140,463	833,808
Medicine tp.....	.....	286	487,600	.....	168,035	790	656,425
Palco.....	289	268	.....	121,925	276,985	26,150	425,060
Northampton tp.....	280	293	571,525	.....	159,850	211,213	942,588
Paradise tp.....	717	622	805,790	35,310	272,710	386,290	1,500,100
Plainville.....	1,119	964	.....	565,770	537,995	58,271	1,162,036
Plainville tp.....	571	561	1,258,623	.....	254,730	170,143	1,683,496
Richland tp.....	501	452	439,159	26,165	176,765	73,402	715,491
Rush tp.....	232	191	481,201	.....	76,075	.....	557,276
Stockton tp.....	284	259	532,303	.....	172,440	1,070	705,813
Sugar Loaf tp.....	308	269	450,200	.....	128,345	.....	578,545
Twin Mound tp.....	307	310	548,803	.....	129,960	3,197	681,960
Walton tp.....	509	504	917,955	.....	346,480	.....	1,264,435
Stockton*.....	1,417	1,194	.....	708,195	678,245	34,348	1,420,788

* In Iowa and Stockton townships.

LIVESTOCK.—ROOKS COUNTY.

Table showing number, value and mortality of livestock in the county for 1917 and 1918.

Livestock.	1917.		1918.		Mortality.	
	Number.	Value.	Number.	Value.	1917.	1918.
Horses.....	11,257	\$1,350,840.00	12,601	\$1,398,711.00	218	281
Mules and asses.....	3,396	458,460.00	2,753	385,420.00	19	22
Milk cows.....	6,274	470,550.00	7,144	585,808.00	67	149
Other cattle.....	27,996	1,399,800.00	20,327	1,097,658.00	570	617
Sheep.....	703	7,733.00	746	9,325.00	1	.....
Swine.....	7,887	161,683.50	4,969	111,802.50	102	111
Totals.....	57,513	\$3,849,066.50	48,540	\$3,588,724.50	977	1,180

Number of dogs in county March 1, 1917, 1,062; March 1, 1918, 1,071.

Number of sheep killed by dogs, year ending March 1, 1917, 2; March 1, 1918, 9.

Mortality of swine from cholera, year ending March 1, 1917, 1; March 1, 1918, 7.

FARM AND CROP STATISTICS.—ROOKS COUNTY.

Table showing acres, product and value of field crops in the county for 1917 and 1918.

Crops.	1917.			1918.		
	Acres.	Product.	Value.	Acres.	Product.	Value.
Winter wheat.....bu.	11,016	33,048	\$70,061.76	70,424	492,968	\$936,639.20
Spring wheat.....bu.	15			2	10	19.00
Corn.....bu.	204,747			105,977	423,908	627,383.84
Oats.....bu.	20,869	41,738	27,964.46	24,285	145,710	106,368.30
Rye.....bu.	194			2,752	22,016	36,326.40
Barley.....bu.	21,397	64,191	64,191.00	17,056	170,560	170,560.00
Emmer ("speltz").....bu.				7	35	27.30
Irish potatoes.....bu.	565	10,735	16,102.50	645	12,900	19,995.00
Sweet potatoes.....bu.	2	160	320.00	3	156	351.00
Cowpeas.....tons						
Flax.....bu.						
Broom corn.....lbs.						
Millet.....tons	1,227	1,227	12,270.00	1,079	809	8,899.00
Sugar beets.....tons						
Sorghum for syrup.....gals.	50			99		
for seed.....bu.	460			1,423	8,538	15,624.54
for hay.....tons	11,514	8,634	60,438.00	15,953	19,941	179,469.00
Milo for grain.....bu.	428			5,210	31,260	50,016.00
for stover*.....tons					7,815	42,982.50
for hay.....tons				80	120	840.00
Kafir for grain.....bu.	16,100			22,275	111,375	175,972.50
for stover*.....tons		16,100	88,550.00		33,413	200,478.00
for hay.....tons	1,495	1,122	8,976.00	1,258	1,887	15,096.00
Feterita for grain.....bu.	2,576	10,304	15,456.00	7,608	38,040	60,864.00
for stover*.....tons		644	3,864.00		13,314	53,256.00
for hay.....tons	130	32	256.00	1,403	2,455	18,412.50
Sudan grass.....tons	527	527	6,324.00	1,366	1,708	18,788.00
Jerusalem corn.....tons	5	4	32.00	53	80	640.00
Alfalfa.....tons	7,510	15,020	270,360.00	7,313	14,626	277,894.00
Timothy.....tons						
Clover.....tons						
Blue grass.....tons						
Sweet clover.....tons	9	†		49	‡ 70	1,260.00
Orchard grass.....tons						
Other tame grasses.....tons	5					
Prairie hay.....tons	6,839	5,129	66,677.00	3,725	2,794	41,910.00
Totals.....	307,680		\$711,842.72	290,045		\$3,060,072.08

Corn on hand March 1, 1917, 85,460 bushels; March 1, 1918, 14,576 bushels.

Wheat on hand March 1, 1917, 119,371 bushels; March 1, 1918, 12,314 bushels.

Prairie grass for pasture March 1, 1918: Acres fenced, 198,082; acres not fenced, 10,633.

* Forage after harvesting grain. † Product of 1916. ‡ Product of 1917.

SUMMARY.—ROOKS COUNTY.

Showing quantity and value of farm products in the county for 1917 and 1918.

Products.	1917.		1918.	
	Quantity.	Value.	Quantity.	Value.
Field crops.....acres	307,680	\$711,842.72	290,045	\$3,060,072.08
Animals slaughtered or sold for slaughter.....		479,081.00		472,765.00
Poultry and eggs sold.....		148,605.00		126,260.00
Wool clip.....lbs.	1,750	490.00	105	56.70
Cheese.....lbs.	1,850	314.50		
Butter.....lbs.	172,273	51,681.90	160,801	62,712.39
Condensed milk.....lbs.				
Milk sold.....		101,425.00		141,674.00
Honey and beeswax.....lbs.	550	99.00	220	55.00
Wood marketed.....		320.00		
Totals.....		\$1,493,859.12		\$3,863,595.17

Number of cream separators March 1, 1917, 873; March 1, 1918, 930.

Number of silos March 1, 1917, 91; March 1, 1918, 144.

Number of tractors March 1, 1917, 65; March 1, 1918, 70.

RUSH COUNTY.

Organized in 1874; area, 458,074 acres; population, 8,139; rank in population, 72; assessed valuation, \$19,629,137; miles of railroad, main track, 62.20; county seat, LaCrosse; population, 741.

POPULATION AND VALUATION.—RUSH COUNTY.

Table showing total population, by townships and cities, for 1917 and 1918, and the assessed valuation of the municipal townships and cities of 1918.

Townships (and cities).	Population.		Assessed valuation of property, 1918.				
	1917.	1918.	Land.	City lots.	Personal.	Railroad, etc.	Total.
The county	8,876	8,139	\$12,496,855	\$1,009,105	\$3,784,485	\$2,338,692	\$19,629,137
Alexander tp.	250	234	\$604,150	\$1,350	\$115,490	\$195,479	\$916,469
Banner tp.	548	512	998,700	.....	294,120	200,039	1,492,859
Belle Prairie tp.	535	482	634,450	26,520	243,515	208,215	1,112,700
Big Timber tp.	713	697	853,500	33,080	202,710	1,432	1,090,722
Brookdale tp.	271	278	654,720	.....	108,050	250,530	1,013,300
Center tp.	617	556	931,100	41,400	264,210	204,755	1,441,465
Fairview tp.	399	392	753,150	.....	111,860	263	865,273
Garfield tp.	466	439	1,159,205	5,325	227,750	201,779	1,594,059
McCracken.....	482	426	.....	202,230	238,170	53,982	494,382
Hampton tp.	343	295	656,310	.....	163,460	24,697	844,467
Illinois tp.	500	486	875,800	6,500	200,810	2,903	1,086,013
La Crosse.....	997	741	.....	403,780	358,970	52,944	815,694
LaCrosse tp.	256	253	809,720	.....	127,980	209,008	1,146,708
Bison.....	390	321	.....	134,580	195,610	30,372	360,562
Lone Star tp.	456	406	882,100	.....	176,500	220,674	1,279,274
Otis.....	399	329	.....	135,550	191,440	29,233	356,223
Pioneer tp.	421	477	900,480	.....	172,100	252,059	1,324,639
Pleasantdale tp.	385	421	899,050	.....	164,540	750	1,064,340
Union tp.	448	389	884,420	18,790	227,200	199,578	1,329,988

LIVESTOCK.—RUSH COUNTY.

Table showing number, value and mortality of livestock in the county for 1917 and 1918.

Livestock.	1917.		1918.		Mortality.	
	Number.	Value.	Number.	Value.	1917.	1918.
Horses.....	10,978	\$1,317,360.00	11,052	\$1,226,772.00	240	384
Mules and asses.....	1,560	210,600.00	1,298	181,720.00	13	11
Milk cows.....	4,379	328,425.00	5,025	412,050.00	110	161
Other cattle.....	14,530	726,500.00	11,978	646,812.00	463	688
Sheep.....	65	715.00	213	2,662.50	2	13
Swine.....	4,338	88,929.00	3,678	82,755.00	199	217
Totals.....	35,850	\$2,672,529.00	33,244	\$2,552,771.50	1,027	1,474

Number of dogs in county March 1, 1917, 965; March 1, 1918, 1,057.

Number of sheep killed by dogs, year ending March 1, 1917, 2; March 1, 1918, 14.

Number of sheep killed by wolves, year ending March 1, 1917, 1.

Mortality of swine from cholera, year ending March 1, 1917, 45; March 1, 1918, 71.

FARM AND CROP STATISTICS.—RUSH COUNTY.

Table showing acres, product and value of field crops in the county for 1917 and 1918.

Crops.	1917.			1918.		
	Acres.	Product.	Value.	Acres.	Product.	Value.
Winter wheat.....bu.	11,053	44,212	\$92,845.20	119,046	714,276	\$1,357,124.40
Spring wheat.....bu.				5	15	28.50
Corn.....bu.	100,704	302,112	356,492.16	21,742	21,742	32,613.00
Oats.....bu.	18,761			8,563	59,941	47,952.80
Rye.....bu.	40			75	750	1,200.00
Barley.....bu.	16,888	50,664	50,664.00	3,317	26,536	26,536.00
Emmer ("speltz").....bu.				17	102	86.70
Irish potatoes.....bu.	307	9,517	16,654.75	390	5,850	9,652.50
Sweet potatoes.....bu.						
Cowpeas.....tons						
Flax.....bu.						
Broom corn.....lbs.				15	4,500	517.50
Millet.....tons	326	326	3,260.00	598	598	7,176.00
Sugar beets.....tons						
Sorghum for syrup.....gals.				5		
for seed.....bu.	1,066	10,660	18,655.00	763	3,815	7,248.50
for hay.....tons	17,053	34,106	341,060.00	6,965	8,706	74,001.00
Milo for grain.....bu.	6,594	52,752	79,128.00	871	5,226	8,361.60
for stover*.....tons		8,242	41,210.00		1,524	9,144.00
for hay.....tons	40	50	350.00	188	329	2,632.00
Kafir for grain.....bu.	22,686	136,116	204,174.00	10,674	42,696	66,178.80
for stover*.....tons		34,029	272,232.00		13,343	100,072.50
for hay.....tons	1,421	2,842	22,736.00	542	678	5,763.00
Peterita for grain.....bu.	15,149	151,490	242,384.00	2,133	8,532	13,224.60
for stover*.....tons		18,936	113,616.00		1,600	1,200.00
for hay.....tons	452	565	4,520.00	744	1,488	14,136.00
Sudan grass.....tons	169	254	2,540.00	814	1,221	12,210.00
Jerusalem corn.....tons	10	20	160.00	8	10	85.00
Alfalfa.....tons	3,128	7,820	156,400.00	2,971	5,199	109,179.00
Timothy.....tons						
Clover.....tons						
Blue grass.....tons				4		
Sweet clover.....tons	11	†			†	
Orchard grass.....tons						
Other tame grasses.....tons						
Prairie hay.....tons	7,298	5,473	82,095.00	3,543	2,657	42,512.00
Totals.....	223,156		\$2,101,176.11	183,993		\$1,959,635.40

Corn on hand March 1, 1917, 8,933 bushels; March 1, 1918, 11,452 bushels.

Wheat on hand March 1, 1917, 141,545 bushels; March 1, 1918, 25,778 bushels.

Prairie grass for pasture March 1, 1918: Acres fenced, 135,842; acres not fenced, 6,229.

* Forage after harvesting grain. † Product of 1916. ‡ Product of 1917.

SUMMARY.—RUSH COUNTY.

Showing quantity and value of farm products in the county for 1917 and 1918.

Products.	1917.		1918.	
	Quantity.	Value.	Quantity.	Value.
Field crops.....acres	223,156	\$2,101,176.11	183,993	\$1,959,635.40
Animals slaughtered or sold for slaughter.....		142,924.00		174,326.00
Poultry and eggs sold.....		96,539.00		97,958.00
Wool clip.....lbs.	10	2.80	42	22.68
Cheese.....lbs.	65	11.05	55	9.90
Butter.....lbs.	64,385	19,315.50	56,036	21,854.04
Condensed milk.....lbs.				
Milk sold.....		57,412.00		76,476.00
Honey and beeswax.....lbs.				
Wood marketed.....		383.00		
Totals.....		\$2,417,763.46		\$2,330,282.02

Number of cream separators March 1, 1917, 652; March 1, 1918, 689.

Number of silos March 1, 1917, 24; March 1, 1918, 38.

Number of tractors March 1, 1917, 111; March 1, 1918, 111.

RUSSELL COUNTY.

Organized in 1872; area, 574,653 acres; population, 11,129; rank in population, 62; assessed valuation, \$28,022,817; miles of railroad, main track, 60.13; county seat, Russell; population, 1,702.

POPULATION AND VALUATION.—RUSSELL COUNTY.

Table showing total population, by townships and cities, for 1917 and 1918, and the assessed valuation of the municipal townships and cities of 1918.

Townships (and cities).	Population.		Assessed valuation of property, 1918.				
	1917.	1918.	Land.	City lots.	Personal.	Railroad, etc.	Total.
The county	11,630	11,129	\$15,951,948	\$2,022,799	\$7,543,189	\$2,504,881	\$28,022,817
Big Creek tp.	739	764	\$1,501,948	\$40,125	\$875,709	\$311,356	\$2,729,138
Bunkerhill.	324	270	113,098	189,731	55,954	358,783	
Center tp.	1,174	1,090	2,555,139	737,577	437,626	3,730,342	
Fairfield tp.	298	286	774,483	170,577	709	945,769	
Lucas.	731	682	342,430	480,770	37,875	861,075	
Fairview tp.	691	555	1,309,589	379,640	179,194	1,868,423	
Grant tp.	546	552	1,254,262	395,906	121,269	1,771,437	
Lincoln tp.	514	514	752,384	287,367	2,328	1,042,079	
Luray.	532	442	209,847	310,631	27,924	548,402	
Luray tp.	506	566	1,159,239	1,154	205,575	1,553,016	
Paradise tp.	952	966	1,869,920	73,070	753,645	2,930,708	
Dorrance.	160	237	96,260	173,382	45,365	315,007	
Plymouth tp.	1,001	1,084	1,958,976	584,501	266,463	2,809,940	
Russell.	1,934	1,702	1,057,865	1,222,285	95,879	2,376,029	
Russell tp.	304	339	991,273	167,830	295,848	1,454,951	
Waldo.	312	248	88,950	130,716	31,380	251,046	
Waldo tp.	576	543	1,082,881	296,638	173,412	1,552,931	
Winterset tp.	336	289	741,854	180,709	1,178	923,741	

LIVESTOCK.—RUSSELL COUNTY.

Table showing number, value and mortality of livestock in the county for 1917 and 1918.

Livestock.	1917.		1918.		Mortality.	
	Number.	Value.	Number.	Value.	1917.	1918.
Horses	13,312	\$1,597,440.00	13,220	\$1,467,420.00	277	447
Mules and asses	1,867	252,045.00	1,497	209,580.00	11	13
Milk cows	5,047	378,525.00	5,873	481,586.00	117	148
Other cattle	27,075	1,353,750.00	27,060	1,461,240.00	701	1,074
Sheep	1,902	20,922.00	2,554	31,925.00	31	100
Swine	5,784	118,572.00	6,768	152,280.00	238	430
Totals	54,987	\$3,721,254.00	56,972	\$3,804,031.00	1,375	2,212

Number of dogs in county March 1, 1917, 1,809; March 1, 1918, 1,267.

Number of sheep killed by dogs, year ending March 1, 1917, 6; March 1, 1918, 13.

Number of sheep killed by wolves, year ending March 1, 1918, 3.

Mortality of swine from cholera, year ending March 1, 1917, 106; March 1, 1918, 4.

FARM AND CROP STATISTICS.—RUSSELL COUNTY.

Table showing acres, product and value of field crops in the county for 1917 and 1918.

Crops.	1917.			1918.		
	Acres.	Product.	Value.	Acres.	Product.	Value.
Winter wheat.....bu.	67,735	338,675	\$660,416.25	132,826	1,328,260	\$2,576,824.40
Spring wheat.....bu.						
Corn.....bu.	118,172	472,688	557,771.84	65,160	130,320	195,480.00
Oats.....bu.	14,997	104,979	69,286.14	16,680	233,520	186,816.00
Rye.....bu.	706	2,118	3,600.60	948	9,480	15,168.00
Barley.....bu.	6,580	72,380	74,551.40	5,114	76,710	76,710.00
Emmer ("speltz").....bu.				4	48	40.80
Irish potatoes.....bu.	437	10,925	17,480.00	487	11,201	18,481.65
Sweet potatoes.....bu.				1	30	67.50
Cowpeas.....tons				1	2	33.00
Flax.....bu.						
Broom corn.....lbs				25	6,875	756.25
Millet.....tons	432	432	4,320.00	383	383	4,596.00
Sugar beets.....tons						
Sorghum for syrup.....gals				8		
for seed.....bu.	452	2,712	3,823.92	2,124	12,744	24,723.36
for hay.....tons	16,443	24,664	172,648.00	12,098	15,123	120,984.00
Milo for grain.....bu.	55	55	82.50	560	4,480	7,168.00
for stover*.....tons		41	205.00		1,120	6,720.00
for hay.....tons	49	25	162.50	44	55	412.50
Kafir for grain.....bu.	22,812	136,872	212,151.60	19,624	78,496	125,593.60
for stover*.....tons		34,218	171,090.00		29,436	206,052.00
for hay.....tons	2,288	3,432	25,740.00	1,360	1,700	14,450.00
Feterita for grain.....bu.	559	4,472	6,752.72	2,393	26,323	42,116.80
for stover*.....tons		978	4,890.00		4,188	16,752.00
for hay.....tons	538	403	2,418.00	1,352	3,042	22,815.00
Sudan grass.....tons	93	140	1,400.00	397	794	8,734.00
Jerusalem corn.....tons	200	300	2,250.00	11	14	119.00
Alfalfa.....tons	4,897	9,794	176,292.00	4,597	8,045	168,945.00
Timothy.....tons						
Clover.....tons				3		
Blue grass.....tons						
Sweet clover.....tons	5	†			‡	
Orchard grass.....tons						
Other tame grasses.....tons	5			8		
Prairie hay.....tons	6,299	4,724	61,412.00	5,834	2,917	43,755.00
Totals.....	263,754		\$2,228,744.47	272,042		\$3,884,313.86

Corn on hand March 1, 1917, 39,240 bushels; March 1, 1918, 46,436 bushels.

Wheat on hand March 1, 1917, 144,934 bushels; March 1, 1918, 35,760 bushels.

Prairie grass for pasture March 1, 1918: Acres fenced, 165,123; acres not fenced, 6,149.

* Forage after harvesting grain. † Product of 1916. ‡ Product of 1917.

SUMMARY.—RUSSELL COUNTY.

Showing quantity and value of farm products in the county for 1917 and 1918.

Products.	1917.		1918.	
	Quantity.	Value.	Quantity.	Value.
Field crops.....acres	263,754	\$2,228,744.47	272,042	\$3,884,313.86
Animals slaughtered or sold for slaughter.....		334,454.00		349,242.00
Poultry and eggs sold.....		136,456.00		139,239.00
Wool clip.....lbs.	2,640	739.20	4,195	2,265.30
Cheese.....lbs.			11	1.98
Butter.....lbs.	114,012	34,203.60	118,952	46,391.28
Condensed milk.....lbs.				
Milk sold.....		81,436.00		118,806.00
Honey and beeswax.....lbs.	485	89.80	230	57.50
Wood marketed.....		50.00		380.00
Totals.....		\$2,816,173.07		\$4,540,696.92

Number of cream separators March 1, 1917, 859; March 1, 1918, 898.

Number of silos March 1, 1917, 26; March 1, 1918, 26.

Number of tractors March 1, 1917, 57; March 1, 1918, 60.

SALINE COUNTY.

Organized in 1859; area, 460,494 acres; population, 23,589; rank in population, 20; assessed valuation, \$59,958,748; miles of railroad, main track, 164.99; county seat, Salina; population, 13,278.

POPULATION AND VALUATION.—SALINE COUNTY.

Table showing total population, by townships and cities, for 1917 and 1918, and the assessed valuation of the municipal townships and cities of 1918.

Townships (and cities).	Population.		Assessed valuation of property, 1918.				
	1917.	1918.	Land.	City lots.	Personal.	Railroad, etc.	Total.
The county	23,041	23,589	\$21,990,070	\$12,652,320	\$18,508,125	\$6,808,233	\$59,958,748
New Cambria....	167	146		\$43,765	\$59,735	\$78,840	\$182,340
Cambria tp.....	457	444	\$1,161,780		327,050	378,085	1,866,915
Dayton tp.....		415	1,692,600		312,565	963,880	2,969,045
Elm Creek tp....	481	469	1,560,440		448,065	185,635	2,194,140
Eureka tp.....	425	455	1,137,250	10,800	356,325	300,985	1,805,360
Falun tp.....	529	525	936,610	40,590	431,580	234,035	1,642,815
Glendale tp.....	317	323	579,470	8,130	196,920	56,650	841,170
Greeley tp.....	587	579	1,303,660	132,795	371,995	596,235	2,404,685
Gypsum.....	653	693		262,615	380,550	49,885	693,050
Gypsum tp.....	515	486	1,146,180		459,705	170,820	1,776,705
Liberty tp.....	341	343	926,170		295,665	287,125	1,508,960
Ohio tp.....	541	480	1,021,970	16,120	340,985	384,720	1,763,795
Pleasant Valley tp.	421	415	723,280		159,580	94,530	977,390
Salina.....	12,578	13,278		11,771,405	10,941,450	1,033,713	23,746,568
Smoky Hill tp....	856	831	1,981,810	135,955	469,205	565,595	3,152,565
Assaria.....	238	245		97,825	158,805	11,090	267,720
Smoky View tp....	679	681	1,514,170	21,440	588,800	318,380	2,442,790
Smolan tp.....	629	641	1,632,160	42,610	702,900	380,430	2,758,100
Solomon tp.....	465	446	1,210,950	7,460	320,960	62,170	1,601,540
Brookville.....	234	241		60,810	91,390	82,665	234,865
Spring Creek tp..	491	477	1,103,790		420,910	346,055	1,870,755
Summit tp.....	173	157	466,260		62,410	245	528,915
Walnut tp.....	471	460	1,041,520		274,205	930	1,316,655
Washington tp....	378	367	850,000		336,370	225,535	1,411,905

LIVESTOCK.—SALINE COUNTY.

Table showing number, value and mortality of livestock in the county for 1917 and 1918.

Livestock.	1917.		1918.		Mortality.	
	Number.	Value.	Number.	Value.	1917.	1918.
Horses.....	11,022	\$1,322,640.00	11,300	\$1,254,300.00	121	202
Mules and asses.....	2,802	378,270.00	2,163	302,820.00	9	20
Milk cows.....	4,866	364,950.00	5,758	472,156.00	34	81
Other cattle.....	32,264	1,613,200.00	34,233	1,848,582.00	274	571
Sheep.....	11	121.00	312	3,900.00	32	
Swine.....	11,425	234,212.50	15,065	338,962.50	127	1,049
Totals.....	62,390	\$3,913,393.50	68,831	\$4,220,720.50	597	1,923

Number of dogs in county March 1, 1917, 1,211; March 1, 1918, 1,638.

Number of sheep killed by dogs, year ending March 1, 1918, 8.

Mortality of swine from cholera, year ending March 1, 1917, 82; March 1, 1918, 805.

FARM AND CROP STATISTICS.—SALINE COUNTY.

Table showing acres, product and value of field crops in the county for 1917 and 1918.

Crops.	1917.			1918.		
	Acres.	Product.	Value.	Acres.	Product.	Value.
Winter wheat.....bu.	82,531	1,155,434	\$2,414,857.06	127,310	2,164,270	\$4,328,540.00
Spring wheat.....bu.				4	56	110.88
Corn.....bu.	91,680	1,283,520	1,386,201.60	59,649	298,245	447,367.50
Oats.....bu.	23,195	672,655	430,499.20	14,424	331,752	238,861.44
Rye.....bu.	1,389	22,224	35,558.40	2,350	39,950	61,922.50
Barley.....bu.	1,293	25,860	25,860.00	884	17,680	18,564.00
Emmer ("speltz").....bu.						
Irish potatoes.....bu.	763	35,098	56,156.80	749	17,227	27,218.66
Sweet potatoes.....bu.	3	210	315.00			
Cowpeas.....tons						
Flax.....bu.						
Broom corn.....lbs.						
Millet.....tons	70	105	997.50	77	96	1,056.00
Sugar beets.....tons						
Sorghum for syrup.....gals.	3	120	84.00	10	400	440.00
for seed.....bu.	88	704	1,267.20	534	5,340	9,879.00
for hay.....tons	6,113	21,396	106,980.00	3,628	7,256	50,792.00
Milo for grain.....bu.	87	1,740	2,610.00	307	3,070	5,065.50
for stover*.....tons		261	1,044.00		461	2,305.00
for hay.....tons	18	45	292.50	11	17	110.50
Kafir for grain.....bu.	7,938	71,442	99,304.38	6,683	40,098	65,359.74
for stover*.....tons		29,766	148,830.00		10,025	50,125.00
for hay.....tons	690	2,415	16,905.00	339	593	4,744.00
Feterita for grain.....bu.	710	7,100	9,230.00	517	5,170	7,755.00
for stover*.....tons		1,420	7,810.00		1,163	5,815.00
for hay.....tons	35	70	420.00	168	378	2,646.00
Sudan grass.....tons	159	636	5,724.00	771	1,542	16,962.00
Jerusalem corn.....tons	16	56	392.00	21	37	296.00
Alfalfa.....tons	17,347	46,837	843,066.00	19,110	42,998	945,956.00
Timothy.....tons						
Clover.....tons						
Blue grass.....tons						
Sweet clover.....tons	4	†		14	‡	
Or hard grass.....tons	20					
Other tame grasses.....tons	26			57		
Prairie hay.....tons	14,736	14,736	221,040.00	6,404	4,803	76,848.00
Totals.....	248,914		\$5,815,444.64	244,021		\$6,368,739.72

Corn on hand March 1, 1917, 181,661 bushels; March 1, 1918, 172,174 bushels.

Wheat on hand March 1, 1917, 59,018 bushels; March 1, 1918, 51,408 bushels.

Prairie grass for pasture March 1, 1918: Acres fenced, 93,964; acres not fenced, 2,500.

* Forage after harvesting grain. † Product of 1916. ‡ Product of 1917.

SUMMARY.—SALINE COUNTY.

Showing quantity and value of farm products in the county for 1917 and 1918.

Products.	1917.		1918.	
	Quantity.	Value.	Quantity.	Value.
Field crops.....acres	248,914	\$5,815,444.64	244,021	\$6,368,739.72
Animals slaughtered or sold for slaughter.....		1,109,632.00		1,517,522.00
Poultry and eggs sold.....		190,092.00		201,627.00
Wool clip.....lbs.			20	10.80
Cheese.....lbs.	90	15.30	5,030	905.40
Butter.....lbs.	276,929	84,776.49	239,304	94,528.56
Condensed milk.....lbs.				
Milk sold.....		95,394.00		136,786.00
Honey and beeswax.....lbs.	6,308	1,139.44	1,370	342.50
Wood marketed.....		249.00		221.00
Totals.....		\$7,296,742.87		\$8,320,682.98

Number of cream separators March 1, 1917, 957; March 1, 1918, 1,031.

Number of silos March 1, 1917, 129; March 1, 1918, 142.

Number of tractors March 1, 1917, 81; March 1, 1918, 87.

SCOTT COUNTY.

Organized in 1886; area, 459,030 acres; population, 3,184; rank in population, 95; assessed valuation, \$7,169,240; miles of railroad, main track, 53.28; county seat, Scott City; population, 1,017.

POPULATION AND VALUATION.—SCOTT COUNTY.

Table showing total population, by townships and cities, for 1917 and 1918, and the assessed valuation of the municipal townships and cities of 1918.

Townships (and cities).	Population.		Assessed valuation of property, 1918.				
	1917.	1918.	Land.	City lots.	Personal.	Railroad, etc.	Total.
The county.....	3,293	3,184	\$3,270,600	\$423,585	\$1,785,105	\$1,689,950	\$7,169,240
Beaver tp.....	253	270	\$407,015	\$3,670	\$222,370	.....	\$633,055
Isabel tp.....	276	220	395,715	2,855	143,690	\$320,888	863,148
Keystone tp.....	316	307	438,945	3,155	205,765	524,735	1,172,600
Lake tp.....	290	259	451,680	.....	174,005	.....	625,685
Michigan tp.....	413	419	509,410	935	222,225	97,278	829,848
Scott City.....	1,174	1,017	.....	399,870	393,535	4,017	907,422
Scott tp.....	309	300	526,315	.....	230,850	474,892	1,232,057
Valley tp.....	262	392	541,520	13,100	192,665	158,140	905,425

LIVESTOCK.—SCOTT COUNTY.

Table showing number, value and mortality of livestock in the county for 1917 and 1918.

Livestock.	1917.		1918.		Mortality.	
	Number.	Value.	Number.	Value.	1917.	1918.
Horses.....	5,184	\$622,080.00	5,686	\$631,146.00	65	61
Mules and asses.....	1,126	152,010.00	1,006	140,840.00	.....	5
Milk cows.....	2,421	181,575.00	2,694	220,908.00	44	36
Other cattle.....	8,953	447,650.00	10,335	558,090.00	130	136
Sheep.....	182	2,002.00	316	3,950.00	.....	.....
Swine.....	1,821	37,330.50	1,349	30,352.50	11	38
Totals.....	19,687	\$1,442,647.50	21,386	\$1,585,286.50	250	276

Number of dogs in county March 1, 1917, 300; March 1, 1918, 397.

Number of sheep killed by dogs, year ending March 1, 1917, 2.

Number of sheep killed by wolves, year ending March 1, 1917, 3; March 1, 1918, 15.

Mortality of swine from cholera, year ending March 1, 1918, 11.

FARM AND CROP STATISTICS.—SCOTT COUNTY.

Table showing acres, product and value of field crops in the county for 1917 and 1918.

Crops.	1917.			1918.		
	Acres.	Product.	Value.	Acres.	Product.	Value.
Winter wheat.....bu.	853	4,265	\$9,041.80	1,917	5,751	\$11,271.96
Spring wheat.....bu.	504			1,082	5,410	10,495.40
Corn.....bu.	17,152	34,304	43,566.08	14,225	42,675	62,305.50
Oats.....bu.	6,345			4,347	13,041	9,780.75
Rye.....bu.	127			95	285	470.25
Barley.....bu.	11,893			7,011	42,066	40,804.02
Emmer ("speltz").....bu.						
Irish potatoes.....bu.	160	4,320	6,912.00	280	8,120	11,368.00
Sweet potatoes.....bu.						
Cowpeas.....tons						
Flax.....bu.						
Broom corn.....lbs.	40	10,000	1,500.00	75	22,500	2,250.00
Millet.....tons	3,112	1,556	15,560.00	3,293	3,293	36,223.00
Sugar beets.....tons	500	4,750	28,500.00	900	5,850	58,500.00
Sorghum for syrup.....gals.	101			24	720	792.00
for seed.....bu.	5,887	11,774	20,015.80	11,228	67,368	121,262.40
for hay.....tons	10,752	8,064	72,576.00	15,365	19,206	211,266.00
Milo for grain.....bu.	7,583	15,166	21,384.06	7,058	42,348	65,215.92
for stover*.....tons		5,687	34,122.00		7,058	42,348.00
for hay.....tons	305	152	1,064.00	766	1,149	9,192.00
Kafir for grain.....bu.	4,970	4,970	7,455.00	3,760	18,800	29,140.00
for stover*.....tons		7,455	59,640.00		3,760	30,080.00
for hay.....tons	220	220	2,310.00	302	378	3,591.00
Feterita for grain.....bu.	3,564	10,692	15,503.40	1,669	11,683	18,108.65
for stover*.....tons		2,673	16,038.00		1,669	11,683.00
for hay.....tons	396	396	2,772.00	753	1,130	9,040.00
Sudan grass.....tons	299	299	2,990.00	572	715	7,865.00
Jerusalem corn.....tons	21	21	220.50			
Alfalfa.....tons	1,639	4,917	88,506.00	1,954	4,885	107,470.00
Timothy.....tons						
Clover.....tons						
Blue grass.....tons						
Sweet clover.....tons						
Orchard grass.....tons						
Other tame grasses.....tons						
Prairie hay.....tons	2,045	2,045	26,585.00	900	675	10,125.00
Totals.....	78,468		\$476,261.64	77,576		\$920,647.85

Corn on hand March 1, 1917, 4,925 bushels; March 1, 1918, 2,340 bushels.

Wheat on hand March 1, 1917, 10,245 bushels; March 1, 1918, 954 bushels.

Prairie grass for pasture March 1, 1918: Acres fenced, 143,939; acres not fenced, 10,565.

* Forage after harvesting grain. † Product of 1916. ‡ Product of 1917.

SUMMARY.—SCOTT COUNTY.

Showing quantity and value of farm products in the county for 1917 and 1918.

Products.	1917.		1918.	
	Quantity.	Value.	Quantity.	Value.
Field crops.....acres	78,468	\$476,261.64	77,576	\$920,647.85
Animals slaughtered or sold for slaughter.....		51,371.00		62,748.00
Poultry and eggs sold.....		24,800.00		23,214.00
Wool clip.....lbs.	2,851	798.28	720	388.80
Cheese.....lbs.	106	18.02		
Butter.....lbs.	42,051	12,615.30	41,122	16,037.58
Condensed milk.....lbs.				
Milk sold.....		34,464.00		51,508.00
Honey and beeswax.....lbs.				
Wood marketed.....				
Totals.....		\$600,328.24		\$1,074,544.23

Number of cream separators March 1, 1917, 199; March 1, 1918, 284.

Number of silos March 1, 1917, 4; March 1, 1918, 12.

Number of tractors March 1, 1917, 12; March 1, 1918, 25.

SEDGWICK COUNTY.

Organized in 1870; area, 644,869 acres; population, 81,631; rank in population, 2; assessed valuation, \$137,018,519; miles of railroad, main track, 259.71; county seat, Wichita; population, 62,404.

POPULATION AND VALUATION.—SEDGWICK COUNTY.

Table showing total population, by townships and cities, for 1917 and 1918, and the assessed valuation of the municipal townships and cities of 1918.

Townships (and cities).	Population.		Assessed valuation of property, 1918.				
	1917.	1918.	Land.	City lots.	Personal.	Railroad, etc.	Total.
The county.....	77,758	81,631	\$36,740,321	\$54,187,490	\$30,721,551	\$15,369,157	\$137,018,519
Afton tp.....	357	328	\$1,055,084		\$193,740	\$357	\$1,249,181
Goddard.....	216 827	177 667		\$66,965	72,130	29,638	168,733
Attica tp.....	611 827	490 667	1,278,252		224,505	195,106	1,697,863
Delano tp.....	894	978	1,848,541	160,350	338,190	421,995	2,769,076
Eagle tp.....	665	655	1,307,157	29,705	317,600	247,352	1,901,814
Erie tp.....	286	280	951,369	4,860	136,250	220,996	1,313,475
Garden Plain.....	287 764	263 782		58,065	130,870	20,269	209,204
Garden Plain tp.....	477 764	519 782	1,099,713		165,140	199,470	1,464,323
Grand River tp.....	400	397	1,003,373		153,220	8,279	1,164,872
Grant tp.....	681	675	1,340,002	10,210	327,840	70,891	1,748,943
Mount Hope.....	541 1,081	467 992		227,860	185,670	30,954	444,484
Greeley tp.....	540 1,081	525 992	1,285,384		199,650	158,566	1,643,600
Gypsum tp.....	468	484	1,064,642		242,210	50,709	1,357,561
Illinois tp.....	444	439	1,284,982	4,830	186,630	106,956	1,583,398
Kechi tp.....	1,070	1,097	2,003,047	179,770	548,720	1,328,982	4,060,519
Lincoln tp.....	583	609	1,037,839	15,145	320,480	368,648	1,742,112
Minneha tp.....	525	550	1,273,257		261,275	288,725	1,823,257
Cheney.....	601 904	574 893		306,150	319,015	54,090	679,255
Morton tp.....	303 904	319 893	1,005,567		237,560	190,543	1,433,670
Clearwater.....	541 941	497 830		218,080	258,900	16,454	493,434
Ninnescah tp.....	400 941	333 830	1,270,303		228,180	404,919	1,903,402
Ohio tp.....	438	438	1,394,286	21,860	389,570	393,591	2,199,307
Park tp.....	754	740	1,614,851	55,890	372,720	158,195	2,201,656
Payne tp.....	465	445	1,072,750	7,160	184,810	344,990	1,600,710
Riverside tp.....	771	800	1,438,209	60,570	333,510	807,582	2,639,871
Derby.....	235 210			74,175	62,140	38,477	174,792
Mulvane.....	311 1,066	304 1,068		151,230	108,090	31,371	290,691
Rockford tp.....	520 642	554 628	1,235,512	6,030	306,045	766,433	2,314,020
Salem tp.....			1,239,230	9,365	332,910	397,248	1,978,753
Andale.....	342 967	292 909		84,670	132,390	19,091	236,151
Sherman tp.....	625 967	617 909	1,375,849		178,230	164,548	1,718,627
Colwich.....	243 778	221 748		71,315	83,861	19,577	174,753
Union tp.....	535 778	527 748	1,362,626		187,500	181,873	1,731,999
Valley Center.....	357 1,004	373 952		150,420	163,890	82,215	396,525
Valley Center tp.....	647 1,004	579 952	1,494,513		324,370	743,028	2,561,911
Viola.....	146 505	155 522		50,170	79,280	36,266	165,716
Viola tp.....	359 505	367 522	1,168,052		166,130	328,522	1,662,704
Waco tp.....	525	631	1,320,708	28,555	284,990	296,608	1,930,861
Wichita tp.....	635	690	1,915,223	404,885	1,429,570	332,348	4,082,026
Wichita.....	58,318	62,404		51,729,205	20,553,770	5,813,295	78,096,270

LIVESTOCK.—SEDGWICK COUNTY.

Table showing number, value and mortality of livestock in the county for 1917 and 1918.

Livestock.	1917.		1918.		Mortality.	
	Number.	Value.	Number.	Value.	1917.	1918.
Horses.....	17,479	\$2,097,480.00	17,064	\$1,894,104.00	313	492
Mules and asses.....	5,022	677,970.00	4,689	656,460.00	14	65
Milk cows.....	12,896	967,200.00	13,698	1,123,236.00	130	461
Other cattle.....	26,559	1,327,950.00	23,224	1,254,096.00	353	1,132
Sheep.....	5,373	59,103.00	4,941	61,762.50	47	168
Swine.....	27,194	557,477.00	27,410	616,725.00	870	2,019
Totals.....	94,523	\$5,687,180.00	91,026	\$5,606,383.50	1,727	4,337

Number of dogs in county March 1, 1917, 2,309; March 1, 1918, 3,978.

Number of sheep killed by dogs, year ending March 1, 1917, 41; March 1, 1918, 2.

Number of sheep killed by wolves, year ending March 1, 1917, 20; March 1, 1918, 20.

Mortality of swine from cholera, year ending March 1, 1917, 645; March 1, 1918, 1,303.

FARM AND CROP STATISTICS.—SEDGWICK COUNTY.

Table showing acres, product and value of field crops in the county for 1917 and 1918.

Crops.	1917.			1918.		
	Acres.	Product.	Value.	Acres.	Product.	Value.
Winter wheat bu.	123,645	1,483,740	\$3,056,504.40	165,342	3,141,498	\$6,314,410.98
Spring wheat bu.						
Corn bu.	150,510	1,354,590	1,652,599.80	106,958	962,622	1,443,933.00
Oats bu.	58,944	1,591,488	986,722.56	71,052	1,989,456	1,392,619.20
Rye bu.	7,115	106,725	181,432.50	6,357	108,069	167,506.95
Barley bu.	129	2,580	2,580.00	507	12,675	13,942.50
Emmer ("spelta") bu.						
Irish potatoes bu.	861	32,718	51,694.44	1,027	37,999	60,038.42
Sweet potatoes bu.	346	17,992	31,486.00	197	11,032	17,982.16
Cowpeas tons	161	201	3,216.00	138	207	3,415.50
Flax bu.						
Broom corn lbs.	90	36,000	5,220.00	72	21,600	2,592.00
Millet tons	594	1,040	11,440.00	79	119	1,428.00
Sugar beets tons	12	108	594.00	10	60	570.00
Sorghum for syrup gals.				73	2,190	2,409.00
for seed bu.	369	4,428	7,084.80	919	9,190	18,380.00
for hay tons	2,747	9,615	86,535.00	1,995	6,983	52,372.50
Milo for grain bu.	602	7,826	11,739.00	1,025	13,325	20,653.75
for stover* tons		1,505	4,515.00		2,306	11,530.00
for hay tons	5	14	91.00	15	38	247.00
Kafir for grain bu.	16,832	151,488	212,083.20	16,853	151,677	242,683.20
for stover* tons		42,080	189,360.00		50,559	252,795.00
for hay tons	943	2,594	20,752.00	720	2,160	14,040.00
Feterita for grain bu.	1,100	17,600	24,640.00	834	10,008	15,512.04
for stover* tons		3,025	10,587.50		2,085	9,382.50
for hay tons	121	363	2,541.00	222	666	4,329.00
Sudan grass tons	804	1,809	16,281.00	2,463	7,389	73,890.00
Jerusalem corn tons	11	31	248.00	63	189	1,228.50
Alfalfa tons	31,956	102,259	1,840,662.00	35,637	98,002	2,156,044.00
Timothy tons	13			12		
Clover tons	13			14		
Blue grass tons	169			104		
Sweet clover tons	897	† 1,200	18,000.00	1,197	† 1,200	24,000.00
Orchard grass tons	99			15		
Other tame grasses tons	151			91		
Prairie hay tons	17,841	17,841	231,933.00	18,290	18,290	292,640.00
Totals	417,080		\$8,660,542.20	432,281		\$12,610,575.56

Corn on hand March 1, 1917, 110,644 bushels; March 1, 1918, 229,195 bushels.

Wheat on hand March 1, 1917, 67,991 bushels; March 1, 1918, 95,495 bushels.

Prairie grass for pasture March 1, 1918: Acres fenced, 110,118; acres not fenced, 2,670.

* Forage after harvesting grain. † Product of 1916. ‡ Product of 1917.

SUMMARY.—SEDGWICK COUNTY.

Showing quantity and value of farm products in the county for 1917 and 1918.

Products.	1917.		1918.	
	Quantity.	Value.	Quantity.	Value.
Field crops acres	417,080	\$8,660,542.20	432,281	\$12,610,575.56
Animals slaughtered or sold for slaughter		1,537,102.00		1,734,441.00
Poultry and eggs sold		263,174.00		263,030.00
Wool clip lbs.	4,539	1,270.92	6,029	3,255.66
Cheese lbs.			5,159	928.62
Butter lbs.	1,429,649	459,079.62	2,389,523	993,354.48
Condensed milk lbs.				
Milk sold		372,494.00		519,895.00
Honey and beeswax lbs.	42,287	7,632.36	32,849	8,222.40
Wood marketed		390.00		1,628.00
Totals		\$11,301,685.10		\$16,135,330.72

Number of cream separators March 1, 1917, 1,381; March 1, 1918, 1,396.

Number of silos March 1, 1917, 403; March 1, 1918, 418.

Number of tractors March 1, 1917, 109; March 1, 1918, 115.

SEWARD COUNTY.

Organized in 1886; area, 409,884 acres; population, 6,006; rank in population, 82; assessed valuation, \$10,177,869; miles of railroad, main track, 29.85; county seat, Liberal; population, 3,098.

POPULATION AND VALUATION.—SEWARD COUNTY.

Table showing total population, by townships and cities, for 1917 and 1918, and the assessed valuation of the municipal townships and cities of 1918.

Townships (and cities).	Population.		Assessed valuation of property, 1918.				
	1917.	1918.	Land.	City lots.	Personal.	Railroad, etc.	Total.
The county.....	6,087	6,006	\$4,713,825	\$1,492,817	\$2,431,875	\$1,539,352	\$10,177,869
Fargo tp.....	1,125	1,193	\$1,428,310	\$59,991	\$574,720	\$903,191	\$2,966,212
Liberal.....	3,391	3,098	.....	1,403,335	1,079,560	99,289	2,582,184
Liberal tp.....	922	1,066	1,754,890	29,491	528,925	532,970	2,846,276
Seward tp.....	649	649	1,530,625	.....	248,670	3,902	1,783,197

LIVESTOCK.—SEWARD COUNTY.

Table showing number, value and mortality of livestock in the county for 1917 and 1918.

Livestock.	1917.		1918.		Mortality.	
	Number.	Value.	Number.	Value.	1917.	1918.
Horses.....	3,821	\$458,520.00	4,065	\$451,215.00	125	144
Mules and asses.....	1,446	194,210.00	1,237	173,180.00	24	18
Milk cows.....	1,453	108,975.00	1,391	114,062.00	47	42
Other cattle.....	10,090	504,500.00	8,651	467,154.00	223	439
Sheep.....	421	4,631.00	305	3,812.50	30	5
Swine.....	2,442	50,061.00	1,509	33,952.50	265	82
Totals.....	19,673	\$1,320,897.00	17,158	\$1,243,376.00	714	730

Number of dogs in county March 1, 1917, 389; March 1, 1918, 437.

Number of sheep killed by dogs, year ending March 1, 1917, 4.

Number of sheep killed by wolves, year ending March 1, 1918, 1.

Mortality of swine from cholera, year ending March 1, 1917, 8.

FARM AND CROP STATISTICS.—SEWARD COUNTY.

Table showing acres, product and value of field crops in the county for 1917 and 1918.

Crops.	1917.			1918.		
	Acres.	Product.	Value.	Acres.	Product.	Value.
Winter wheat.....bu.	11,793	35,379	\$73,588.32	30,146	301,460	\$599,905.40
Spring wheat.....bu.						
Corn.....bu.	18,857	18,857	23,571.25	6,988	34,940	52,060.60
Oats.....bu.	5,321			4,505	40,545	32,436.00
Rye.....bu.	1,153	2,306	3,689.60	1,827	20,097	33,160.05
Barley.....bu.	9,215	18,430	18,430.00	999	3,996	3,796.20
Emmer ("speltz").....bu.						
Irish potatoes.....bu.	18	234	386.10	33	495	742.50
Sweet potatoes.....bu.	1	50	100.00			
Cowpeas.....tons				63	95	1,567.50
Flax.....bu.						
Broom corn.....lbs.	3,769	1,281,460	166,589.80	4,151	1,299,263	123,429.99
Millet.....tons	10	8	88.00	40	40	440.00
Sugar beets.....tons						
Sorghum for syrup.....gals.						
for seed.....bu.	1,501	10,507	15,760.50	8,970	107,640	188,370.00
for hay.....tons	9,767	17,093	153,837.00	5,413	13,533	135,330.00
Milo for grain.....bu.	38,603	501,839	677,482.65	24,981	424,677	624,275.19
for stover*.....tons		38,603	154,412.00		24,981	124,905.00
for hay.....tons	60	60	420.00			
Kafir for grain.....bu.	26,725	267,250	360,787.50	26,088	365,232	525,934.08
for stover*.....tons		40,087	280,609.00		39,132	273,924.00
for hay.....tons	140	140	1,400.00	40	90	765.00
Feterita for grain.....bu.	10,037	100,370	130,481.00	6,001	102,017	144,864.14
for stover*.....tons		7,528	45,168.00		9,002	49,511.00
for hay.....tons				15	23	172.50
Sudan grass.....tons	506	886	10,632.00	676	1,690	18,590.00
Jerusalem corn.....tons	5	5	50.00	35	79	671.50
Alfalfa.....tons	250	425	7,650.00	30	45	945.00
Timothy.....tons						
Clover.....tons						
Blue grass.....tons						
Sweet clover.....tons		†		20	‡ 40	760.00
Orchard grass.....tons						
Other tame grasses.....tons						
Prairie hay.....tons	930	930	13,950.00	5,640	4,230	67,680.00
Totals.....	138,661		\$2,139,082.72	126,661		\$3,004,235.65

Corn on hand March 1, 1917, 5,940 bushels; March 1, 1918, 2,760 bushels.

Wheat on hand March 1, 1917, 5,190 bushels; March 1, 1918, 650 bushels.

Prairie grass for pasture March 1, 1918: Acres fenced, 98,806; acres not fenced, 6,321.

* Forage after harvesting grain. † Product of 1916. ‡ Product of 1917.

SUMMARY.—SEWARD COUNTY.

Showing quantity and value of farm products in the county for 1917 and 1918.

Products.	1917.		1918.	
	Quantity.	Value.	Quantity.	Value.
Field crops.....acres	138,661	\$2,139,082.72	126,661	\$3,004,235.65
Animals slaughtered or sold for slaughter.....		148,777.00		111,479.00
Poultry and eggs sold.....		20,063.00		13,427.00
Wool clip.....lbs.	620	173.60		
Cheese.....lbs.				
Butter.....lbs.	151,280	48,642.15	178,382	73,741.86
Condensed milk.....lbs.				
Milk sold.....		14,524.00		25,496.00
Honey and beeswax.....lbs.				
Wood marketed.....				
Totals.....		\$2,371,262.47		\$3,228,379.51

Number of cream separators March 1, 1917, 203; March 1, 1918, 186.

Number of silos March 1, 1917, 61; March 1, 1918, 66.

Number of tractors March 1, 1917, 34; March 1, 1918, 29.

SHAWNEE COUNTY.

Organized in 1855; area, 354,433 acres; population, 60,215; rank in population, 4; assessed valuation, \$99,859,482; miles of railroad, main track, 116.27; county seat, Topeka; population, 40,624.

POPULATION AND VALUATION.—SHAWNEE COUNTY.

Table showing total population, by townships and cities, for 1917 and 1918, and the assessed valuation of the municipal townships and cities of 1918.

Townships (and cities).	Population.		Assessed valuation of property, 1918.					
	1917.	1918.	Land.	City lots.	Personal.	Railroad, etc.	Total.	
The county.....	64,192	60,215	\$21,580,963	\$40,324,375	25,006,295	\$12,947,849	\$99,859,482	
Auburn tp.....	840	818	\$1,464,855	\$30,210	\$328,850	\$954	\$1,824,869	
Willard.....	129	125	1,038	1,665,927	35,800	477,025	400,893	2,579,645
Dover tp.....	896	913	698	2,028,840	465,815	463,837	2,958,492	
Menoken tp.....	765	1,019	1,742,450	108,535	381,360	370,744	2,603,089	
Mission tp.....	976	1,243	1,725,004	35,940	385,230	197,881	2,344,055	
Monmouth tp.....	1,226	605	1,527	2,160,434	240,665	765,010	603,820	3,769,929
Rossville.....	620	922	972	1,893,670	86,370	440,930	601,112	3,022,082
Rossville tp.....	955	262	241	3,337,131	304,190	851,610	1,438,941	5,931,872
Silver Lake.....	262	731	867	1,423,242	2,250	292,185	587,723	2,305,400
Silver Lake tp.....	724	986	731	2,678,856	2,502,145	874,165	1,230,079	7,285,245
Soldier tp.....	3,034	3,058	867	1,460,554	26,145	263,580	510,885	2,261,164
Tecumseh tp.....	887	1,700	7,633	2,502,145	874,165	1,230,079	7,285,245	
Oakland.....	1,715	5,933	7,633	2,678,856	2,502,145	874,165	1,230,079	7,285,245
Topeka tp.....	6,138	7,853	5,933	2,678,856	2,502,145	874,165	1,230,079	7,285,245
Williamsport tp.....	700	718	1,460,554	26,145	263,580	510,885	2,261,164	
Topeka:								
First ward.....	5,132	4,092						
Second ward.....	9,609	8,706						
Third ward.....	9,274	8,746						
Fourth ward.....	6,981	6,407	40,624	36,952,125	19,480,535	6,540,980	62,973,640	
Fifth ward.....	7,683	7,351						
Sixth ward.....	5,646	5,322						

LIVESTOCK.—SHAWNEE COUNTY.

Table showing number, value and mortality of livestock in the county for 1917 and 1918.

Livestock.	1917.		1918.		Mortality.	
	Number.	Value.	Number.	Value.	1917.	1918.
Horses.....	11,562	\$1,387,440.00	11,187	\$1,241,757.00	151	200
Mules and asses.....	2,288	308,880.00	2,046	286,440.00	10	23
Milk cows.....	7,822	586,650.00	7,601	623,282.00	121	105
Other cattle.....	19,506	975,300.00	18,659	1,007,586.00	267	380
Sheep.....	1,623	17,853.00	2,767	34,587.50	89	22
Swine.....	16,593	340,156.50	16,598	373,455.00	594	567
Totals.....	59,394	\$3,616,279.50	58,858	\$3,567,107.50	1,232	1,297

Number of dogs in county March 1, 1917, 1,977; March 1, 1918, 1,838.

Number of sheep killed by dogs, year ending March 1, 1917, 42; March 1, 1918, 9.

Number of sheep killed by wolves, year ending March 1, 1918, 10.

Mortality of swine from cholera, year ending March 1, 1917, 346; March 1, 1918, 277.

FARM AND CROP STATISTICS.—SHAWNEE COUNTY.

Table showing acres, product and value of field crops in the county for 1917 and 1918.

Crops.	1917.			1918.		
	Acres.	Product.	Value.	Acres.	Product.	Value.
Winter wheat.....bu.	20,629	433,209	\$927,067.26	36,003	900,075	\$1,845,153.75
Spring wheat.....bu.				5	100	203.00
Corn.....bu.	70,113	1,752,825	1,998,220.50	53,004	901,068	1,270,505.88
Oats.....bu.	17,259	828,432	513,627.84	18,585	650,475	429,313.50
Rye.....bu.	481	9,139	15,444.91	473	9,933	16,389.45
Barley.....bu.	84	2,520	2,520.00	26	650	682.50
Emmer ("speltz").....bu.				1	33	23.43
Irish potatoes.....bu.	2,163	192,507	240,633.75	2,831	254,790	308,295.90
Sweet potatoes.....bu.	504	52,416	60,278.40	437	63,365	95,047.50
Cowpeas.....tons	39	49	784.00			
Flax.....bu.				12	84	273.00
Broom corn.....lbs.						
Millet.....tons	304	608	6,080.00	70	158	1,738.00
Sugar beets.....tons				1	6	57.00
Sorghum for syrup.....gals.	148	10,360	7,252.00	140	11,200	12,320.00
for seed.....bu.	134	2,278	4,100.40	99	1,485	2,628.45
for hay.....tons	736	2,944	14,720.00	767	2,685	17,452.50
Milo for grain.....bu.	28	560	812.00	44	660	1,056.00
for stover*.....tons		98	392.00		110	550.00
for hay.....tons						
Kafir for grain.....bu.	3,632	58,112	92,979.20	2,498	37,470	61,825.50
for stover*.....tons		12,712	50,848.00		7,494	52,458.00
for hay.....tons	482	1,928	9,640.00	99	297	2,524.50
Feterita for grain.....bu.	71	1,065	1,384.50	62	930	1,488.00
for stover*.....tons		213	852.00		186	930.00
for hay.....tons	30	90	540.00	2	6	42.00
Sudan grass.....tons	91	364	3,276.00	125	375	3,750.00
Jerusalem corn.....tons	4	16	80.00	37	111	943.50
Alfalfa.....tons	18,276	56,656	1,019,808.00	20,475	51,188	1,126,136.00
Timothy.....tons	2,970			2,746		
Clover.....tons	3,205			999		
Blue grass.....tons	10,410			9,053		
Sweet clover.....tons	143	† 9,298	148,768.00	217	‡ 7,371	162,162.00
Orchard grass.....tons	46			66		
Other tame grasses.....tons	280			262		
Prairie hay.....tons	24,662	24,662	369,930.00	23,280	17,460	314,280.00
Totals.....	176,924		\$5,490,038.76	172,419		\$5,728,229.36

Corn on hand March 1, 1917, 106,359 bushels; March 1, 1918, 277,981 bushels.

Wheat on hand March 1, 1917, 3,834 bushels; March 1, 1918, 4,820 bushels.

Prairie grass for pasture March 1, 1918: Acres fenced, 56,838; acres not fenced, 465.

* Forage after harvesting grain. † Product of 1916. ‡ Product of 1917.

SUMMARY.—SHAWNEE COUNTY.

Showing quantity and value of farm products in the county for 1917 and 1918.

Products.	1917.		1918.	
	Quantity.	Value.	Quantity.	Value.
Field crops.....acres	176,924	\$5,490,038.76	172,419	\$5,728,229.36
Animals slaughtered or sold for slaughter.....		806,266.00		1,010,063.00
Poultry and eggs sold.....		178,603.00		171,351.00
Wool clip.....lbs.	6,202	1,736.56	7,862	4,245.48
Cheese.....lbs.	10	1.70		
Butter.....lbs.	8,996,433	2,961,633.36	8,776,461	3,681,333.24
Condensed milk.....lbs.				
Milk sold.....		281,837.00		306,459.00
Honey and beeswax.....lbs.	21,919	3,991.92	7,240	1,810.20
Wood marketed.....		6,432.00		6,734.00
Totals.....		\$9,730,540.30		\$10,910,225.28

Number of cream separators March 1, 1917, 795; March 1, 1918, 879.

Number of silos March 1, 1917, 140; March 1, 1918, 127.

Number of tractors March 1, 1917, 20; March 1, 1918, 35.

SHERIDAN COUNTY.

Organized in 1880; area, 574,538 acres; population, 5,300; rank in population, 85; assessed valuation, \$12,626,358; miles of railroad, main track, 43.52; county seat, Hoxie; population, 572.

POPULATION AND VALUATION.—SHERIDAN COUNTY.

Table showing total population, by townships and cities, for 1917 and 1918, and the assessed valuation of the municipal townships and cities of 1918.

Townships (and cities).	Population.		Assessed valuation of property, 1918.				
	1917.	1918.	Land.	City lots.	Personal.	Railroad, etc.	Total.
The county.....	5,565	5,300	\$7,852,875	\$270,545	\$2,932,890	\$1,570,048	\$12,626,358
Adell tp.....	309	342	\$453,095		\$141,215	\$1,040	\$595,350
Bloomfield tp.....	157	159	309,670		48,455	14,918	373,043
Bow Creek tp.....	397	354	655,975		189,640	751	846,366
Hoxie.....	639\	572\		\$220,280	528,670	3,530	752,480
Kenneth tp.....	143\	159\	421,905		170,580	182,801	775,286
Logan tp.....	314	330	605,125		178,900	346,737	1,130,762
Parnell tp.....	286	284	613,980		150,675	1,071	765,726
Prairie Dog tp.....	208	197	321,960		83,835	335,897	741,692
Saline tp.....	775	755	1,242,395		361,710	2,672	1,606,777
Selden.....	369\	353\		50,265	163,580	43,884	257,729
Sheridan tp.....	355\	362\	460,470		110,245	275,740	846,455
Solomon tp.....	552	519	926,790		261,350	2,202	1,190,342
Spring Brook tp.....	381	322	910,195		247,955	1,057	1,159,207
Union tp.....	271	218	317,465		111,355	129	428,949
Valley tp.....	409	374	613,850		184,725	357,619	1,156,194

LIVESTOCK.—SHERIDAN COUNTY.

Table showing number, value and mortality of livestock in the county for 1917 and 1918.

Livestock.	1917.		1918.		Mortality.	
	Number.	Value.	Number.	Value.	1917.	1918.
Horses.....	8,354	\$1,002,480.00	8,696	\$965,256.00	120	127
Mules and asses.....	2,009	271,215.00	1,531	214,340.00	8	11
Milk cows.....	3,929	294,675.00	4,799	393,518.00	45	49
Other cattle.....	14,901	745,050.00	13,117	708,318.00	135	209
Sheep.....	523	5,753.00	945	11,812.50	.....	5
Swine.....	5,949	121,954.50	4,461	100,372.50	302	39
Totals.....	35,665	\$2,441,127.50	33,549	\$2,393,617.00	610	440

Number of dogs in county March 1, 1917, 536; March 1, 1918, 605.

Mortality of swine from cholera, year ending March 1, 1917, 74.

FARM AND CROP STATISTICS.—SHERIDAN COUNTY.

Table showing acres, product and value of field crops in the county for 1917 and 1918.

Crops.	1917.			1918.		
	Acres.	Product.	Value.	Acres.	Product.	Value.
Winter wheat.....bu.	21,374	42,748	\$90,198.28	15,317	45,951	\$89,604.45
Spring wheat.....bu.	160			245	245	475.30
Corn.....bu.	75,611			56,178	56,178	81,458.10
Oats.....bu.	15,824			7,145	7,145	5,716.00
Rye.....bu.	631			185	370	610.50
Barley.....bu.	55,809	167,427	167,427.00	27,280	136,400	129,580.00
Emmer ("speltz").....bu.	85					
Irish potatoes.....bu.	266	4,788	7,182.00	326	1,956	2,836.20
Sweet potatoes.....bu.						
Cowpeas.....tons						
Flax.....bu.						
Broom corn.....lbs.				20	6,000	600.00
Millet.....tons	3,704	1,852	18,520.00	4,603	3,452	37,972.00
Sugar beets.....tons						
Sorghum for syrup.....gals.	5			170		
for seed.....bu.	1,404			5,716	45,728	82,310.40
for hay.....tons	19,911	9,956	99,560.00	8,855	11,069	105,155.50
Milo for grain.....bu.	3,264			3,393	13,572	20,358.00
for stover*.....tons		816	4,080.00		3,393	20,358.00
for hay.....tons	297	74	592.00	197	296	2,516.00
Kafir for grain.....bu.	18,700			7,621	22,863	36,580.80
for stover*.....tons		18,700	130,900.00		7,621	45,726.00
for hay.....tons	719	359	3,590.00	625	1,250	11,250.00
Feterita for grain.....bu.	4,883			1,440	4,320	6,480.00
for stover*.....tons					1,800	7,200.00
for hay.....tons	233			403	504	4,032.00
Sudan grass.....tons	328	164	1,968.00	1,210	1,513	16,643.00
Jerusalem corn.....tons	165	83	830.00	137	274	2,466.00
Alfalfa.....tons	3,585	6,812	136,240.00	2,838	5,676	107,844.00
Timothy.....tons						
Clover.....tons						
Blue grass.....tons		180	2,700.00			
Sweet clover.....tons						
Orchard grass.....tons						
Other tame grasses.....tons						
Prairie hay.....tons	4,675	2,337	35,055.00	4,082	3,062	48,992.00
Totals.....	231,633		\$698,842.28	147,986		\$866,764.25

Corn on hand March 1, 1917, 63,980 bushels; March 1, 1918, 9,209 bushels.

Wheat on hand March 1, 1917, 73,483 bushels; March 1, 1918, 3,201 bushels.

Prairie grass for pasture March 1, 1918: Acres fenced, 182,924; acres not fenced, 23,832.

* Forage after harvesting grain. † Product of 1916. ‡ Product of 1917.

SUMMARY.—SHERIDAN COUNTY.

Showing quantity and value of farm products in the county for 1917 and 1918.

Products.	1917.		1918.	
	Quantity.	Value.	Quantity.	Value.
Field crops.....acres	231,633	\$698,842.28	147,986	\$866,764.25
Animals slaughtered or sold for slaughter.....		339,608.00		347,853.00
Poultry and eggs sold.....		71,242.00		69,748.00
Wool clip.....lbs.	1,930	540.40	2,422	1,307.88
Cheese.....lbs.			250	45.00
Butter.....lbs.	70,277	21,083.10	71,774	27,991.88
Condensed milk.....lbs.				
Milk sold.....		58,491.00		82,134.00
Honey and beeswax.....lbs.				
Wood marketed.....				406.00
Totals.....		\$1,189,806.78		\$1,396,249.99

Number of cream separators March 1, 1917, 484; March 1, 1918, 617.

Number of silos March 1, 1917, 32; March 1, 1918, 38.

Number of tractors March 1, 1917, 33; March 1, 1918, 39.

SHERMAN COUNTY.

Organized in 1886; area, 675,931 acres; population, 4,821; rank in population, 89; assessed valuation, \$10,161,053; miles of railroad, main track, 35.35; county seat, Goodland; population, 2,213.

POPULATION AND VALUATION.—SHERMAN COUNTY.

Table showing total population, by townships and cities, for 1917 and 1918, and the assessed valuation of the municipal townships and cities of 1918.

Townships (and cities).	Population.		Assessed valuation of property, 1918.				
	1917.	1918.	Land.	City lots.	Personal.	Railroad, etc.	Total.
The county.....	4,768	4,821	\$4,940,171	\$923,385	\$2,299,825	\$1,997,672	\$10,161,053
Grant tp.....	350	363	\$598,915	.....	\$214,935	.....	\$813,850
Iowa tp.....	131	118	372,165	.....	103,470	\$195	475,830
Goodland.....	2,205	2,213	.....	\$863,135	667,500	220,479	1,751,114
Itasca tp.....	116	115	248,460	50	82,665	232,719	563,894
Lincoln tp.....	160	163	322,395	4,610	109,260	316,192	752,457
Llanos tp.....	228	240	349,945	.....	110,590	.....	460,535
Logan tp.....	161	147	336,355	.....	70,370	313,080	719,805
McPherson tp.....	104	103	263,415	.....	85,015	25	348,455
Shermanville tp.....	131	168	316,920	.....	116,755	382	434,057
Smoky tp.....	219	225	556,100	.....	170,120	607	726,827
State Line tp.....	307	316	313,790	54,180	203,665	285,655	857,290
Union tp.....	118	128	275,935	.....	61,350	314,991	652,276
Voltaire tp.....	344	356	693,780	.....	221,665	1,246	916,691
Washington tp.....	194	166	291,996	1,410	82,465	312,101	687,972

LIVESTOCK.—SHERMAN COUNTY.

Table showing number, value and mortality of livestock in the county for 1917 and 1918.

Livestock.	1917.		1918.		Mortality.	
	Number.	Value.	Number.	Value.	1917.	1918.
Horses.....	7,624	\$914,880.00	8,187	\$908,757.00	100	94
Mules and asses.....	990	133,650.00	891	124,740.00	3	14
Milk cows.....	3,716	278,700.00	4,324	354,568.00	36	55
Other cattle.....	16,274	813,700.00	17,155	926,370.00	191	314
Sheep.....	36	396.00	134	1,675.00	.....	1
Swine.....	2,222	45,551.00	2,464	55,440.00	24	24
Totals.....	30,862	\$2,186,877.00	33,155	\$2,371,550.00	354	502

Number of dogs in county March 1, 1917, 448; March 1, 1918, 500.

Number of sheep killed by dogs, year ending March 1, 1918, 5.

Number of sheep killed by wolves, year ending March 1, 1917, 2.

Mortality of swine from cholera, year ending March 1, 1918, 6.

FARM AND CROP STATISTICS.—SHERMAN COUNTY.

Table showing acres, product and value of field crops in the county for 1917 and 1918.

Crops.	1917.			1918.		
	Acres.	Product.	Value.	Acres.	Product.	Value.
Winter wheat.....bu.	6,827	27,308	\$55,708.32	30,291	212,037	\$402,870.30
Spring wheat.....bu.	5,592	22,368	44,288.64	8,393	47,805	89,395.35
Corn.....bu.	33,190	265,520	331,900.00	23,265	255,915	332,689.50
Oats.....bu.	2,231	15,617	10,463.39	1,585	19,020	14,265.00
Rye.....bu.	230	690	1,207.50	498	3,486	5,612.46
Barley.....bu.	35,333	317,997	317,997.00	32,804	426,452	392,335.84
Emmer ("speltz").....bu.				34	340	272.00
Irish potatoes.....bu.	94	2,914	4,371.00	182	6,552	9,500.40
Sweet potatoes.....bu.				1	20	40.00
Cowpeas.....tons						
Flax.....bu.						
Broom corn.....lbs.	35	10,500	1,312.50	50	15,000	1,500.00
Millet.....tons	3,249	3,249	35,739.00	3,797	4,746	47,460.00
Sugar beets.....tons	11	110	605.00			
Sorghum for syrup.....g ls.				5		
for seed.....bu.	102	306	459.00	250	3,000	5,500.00
for hay.....tons	10,401	10,401	83,208.00	11,050	22,100	198,900.00
Milo for grain.....bu.	143			1,119	11,190	16,225.50
for stover*.....tons		71	355.00		1,119	5,595.00
for hay.....tons	90	45	360.00	124	155	1,395.00
Kafir for grain.....bu.	1,066			1,685	16,850	26,117.50
for stover*.....tons		1,599	9,594.00		3,370	16,850.00
for hay.....tons	300	225	2,025.00	243	547	4,376.00
Feterita for grain.....bu.	72			72	576	864.00
for stover*.....tons		36	216.00		54	270.00
for hay.....tons	70	17	136.00	104	182	1,456.00
Sudan grass.....tons	314	314	3,140.00	621	1,242	12,420.00
Jerusalem corn.....tons				10	23	184.00
Alfalfa.....tons	3,209	8,023	160,460.00	2,371	6,520	117,360.00
Timothy.....tons						
Clover.....tons						
Blue grass.....tons	5					
Sweet clover.....tons	25	† 60	960.00	25	‡	
Orchard grass.....tons						
Other tame grasses.....tons						
Prairie hay.....tons	4,063	4,063	52,819.00	4,419	3,314	49,710.00
Totals.....	106,652		\$1,117,324.35	122,998		\$1,753,213.85

Corn on hand March 1, 1917, 23,450 bushels; March 1, 1918, 25,850 bushels.

Wheat on hand March 1, 1917, 15,127 bushels; March 1, 1918, 2,825 bushels.

Prairie grass for pasture March 1, 1918: Acres fenced, 329,047; acres not fenced, 27,495.

* Forage after harvesting grain. † Product of 1916. ‡ Product of 1917.

SUMMARY.—SHERMAN COUNTY.

Showing quantity and value of farm products in the county for 1917 and 1918.

Products.	1917.		1918.	
	Quantity.	Value.	Quantity.	Value.
Field crops.....acres	106,652	\$1,117,324.35	122,998	\$1,753,213.85
Animals slaughtered or sold for slaughter.....		139,654.00		213,803.00
Poultry and eggs sold.....		31,254.00		37,871.00
Wool clip.....lbs.	12	3.36		
Cheese.....lbs.			75	13.50
Butter.....lbs.	44,200	13,260.00	46,517	18,141.63
Condensed milk.....lbs.				
Milk sold.....		52,355.00		75,168.00
Honey and beeswax.....lbs.				
Wool marketed.....		3.00		127.00
Totals.....		\$1,353,853.71		\$2,098,337.98

Number of cream separators March 1, 1917, 343; March 1, 1918, 353.

Number of silos March 1, 1917, 32; March 1, 1918, 50.

Number of tractors March 1, 1917, 18; March 1, 1918, 26.

SMITH COUNTY.

Organized in 1872; area, 575,160 acres; population, 15,025; rank in population, 45; assessed valuation, \$33,733,872; miles of railroad, main track, 52.62; county seat, Smith Center; population, 1,566.

POPULATION AND VALUATION.—SMITH COUNTY.

Table showing total population, by townships and cities, for 1917 and 1918, and the assessed valuation of the municipal townships and cities of 1918.

Townships (and cities).	Population.		Assessed valuation of property, 1918.				
	1917.	1918.	Land.	City lots.	Personal.	Railroad, etc.	Total.
The county.....	15,571	15,025	\$21,328,635	\$1,917,515	\$8,226,800	\$2,260,922	\$33,733,872
Gaylord.....	350	330		\$142,470	\$148,785	\$19,117	\$310,372
Banner tp.....	423	423	\$773,750		187,595	1,554	962,899
Beaver tp.....		487	748,000		288,920	1,187	1,038,107
Blaine tp.....		600	988,695	27,900	310,010	337,864	1,664,469
Kensington.....	564	565		303,450	326,740	50,940	681,139
Cedar tp.....	499	458	1,086,885		270,770	269,197	1,626,852
Smith Center.....	1,564	1,566		792,645	724,495	83,845	1,600,985
Center tp.....	439	444	1,115,225		284,150	292,345	1,691,720
Cora tp.....		483	823,360	720	271,755		1,095,835
Crystal Plains tp.....		407	942,125		167,665	1,187	1,110,977
Dor tp.....		297	572,485		153,000	2,141	727,626
Garfield tp.....		369	650,290		183,085	42,712	876,087
German tp.....		443	598,070		189,285	268	787,623
Harlan tp.....		666	916,680	36,120	309,500	194,681	1,456,981
Cedar.....	193	129		49,875	81,540	15,913	147,328
Harvey tp.....	531	461	1,048,770		308,315	64,935	1,422,020
Houston tp.....		435	708,785		184,835	70,725	964,345
Athol.....	300	298		122,465	187,100	22,703	332,268
Lane tp.....	449	426	1,082,380		287,105	306,056	1,675,541
Lincoln tp.....		449	825,295		327,165	793	1,153,253
Logan tp.....		502	742,615		212,965	580	956,160
Martin tp.....		543	663,760	7,025	291,655	125	962,565
Lebanon.....	807	767		420,225	389,130	35,100	844,455
Oak tp.....	663	648	1,082,045		283,245	288,332	1,653,622
Pawnee tp.....		467	787,690		298,435	312	1,086,437
Pleasant tp.....		464	827,320		278,345		1,105,665
Swan tp.....		369	888,940		298,820	650	1,188,410
Valley tp.....		434	949,790	14,620	308,675	154,314	1,427,399
Washington tp.....		441	830,160		201,920	1,874	1,033,954
Webster tp.....		404	797,920		266,660	110	1,064,690
White Rock tp.....		529	877,600		205,135	1,353	1,084,088

LIVESTOCK.—SMITH COUNTY.

Table showing number, value and mortality of livestock in the county for 1917 and 1918.

Livestock.	1917.		1918.		Mortality.	
	Number.	Value.	Number.	Value.	1917.	1918.
Horses.....	16,192	\$1,943,040.00	16,182	\$1,796,202.00	267	327
Mules and asses.....	4,187	565,245.00	3,318	464,520.00	66	30
Milk cows.....	10,459	784,425.00	12,000	984,000.00	155	137
Other cattle.....	30,766	1,538,300.00	23,988	1,295,244.00	637	628
Sheep.....	1,474	16,214.00	1,324	16,550.00	5	21
Swine.....	32,353	663,236.50	27,136	610,560.00	2,239	1,123
Totals.....	95,431	\$5,510,460.50	83,946	\$5,167,076.00	3,369	2,266

Number of dogs in county March 1, 1917, 2,108; March 1, 1918, 2,040.

Number of sheep killed by dogs, year ending March 1, 1917, 3.

Number of sheep killed by wolves, year ending March 1, 1918, 1.

Mortality of swine from cholera, year ending March 1, 1917, 1,819; March 1, 1918, 480.

FARM AND CROP STATISTICS.—SMITH COUNTY.

Table showing acres, product and value of field crops in the county for 1917 and 1918.

Crops.	1917.			1918.		
	Acres.	Product.	Value.	Acres.	Product.	Value.
Winter wheat.....bu.	3,103	12,412	\$25,196.36	83,330	749,970	\$1,439,942.40
Spring wheat.....bu.	30	90	177.30	91	910	1,729.00
Corn.....bu.	249,353	997,412	1,117,101.44	167,822	1,678,220	2,299,161.40
Oats.....bu.	26,624	319,488	201,277.44	17,618	281,888	211,416.00
Rye.....bu.	186	744	1,302.00	1,854	18,540	30,776.40
Barley.....bu.	4,173	66,768	68,771.04	5,169	93,042	93,042.00
Emmer ("speltz").....bu.						
Irish potatoes.....bu.	1,542	29,298	42,482.10	1,469	38,194	56,909.06
Sweet potatoes.....bu.						
Cowpeas.....tons						
Flax.....bu.						
Broom corn.....lbs.	12	3,600	486.00	10	2,750	275.00
Millet.....tons	4,368	2,184	24,024.00	2,469	3,086	37,032.00
Sugar beets.....tons						
Sorghum for syrup.....gals.	5	50	35.00	24	480	528.00
for seed.....bu.	744	2,976	5,356.80	1,461	17,532	30,505.68
for hay.....tons	7,281	10,922	87,376.00	6,015	12,030	96,240.00
Milo for grain.....bu.	134	268	348.40	385	2,695	4,312.00
for stover*.....tons		134	670.00		578	2,890.00
for hay.....tons	20	20	140.00			
Kafir for grain.....bu.	3,752	22,512	33,768.00	2,612	18,284	29,254.40
for stover*.....tons		3,752	18,760.00		5,877	44,077.50
for hay.....tons	337	421	3,368.00	202	455	3,867.50
Feterita for grain.....bu.	272	2,176	3,264.00	770	5,390	8,624.00
for stover*.....tons		272	1,360.00		1,155	5,775.00
for hay.....tons	90	90	720.00	380	760	5,320.00
Sudan grass.....tons	237	119	1,428.00	693	1,733	17,330.00
Jerusalem corn.....tons				7	16	136.00
Alfalfa.....tons	34,050	71,505	1,287,090.00	34,090	68,180	1,363,600.00
Timothy.....tons						
Clover.....tons						
Blue grass.....tons						
Sweet clover.....tons	82	† 110	1,650.00	122	‡ 125	2,250.00
Orchard grass.....tons	26			2		
Other tame grasses.....tons	15			11		
Prairie hay.....tons	15,270	3,817	53,438.00	12,550	9,413	141,195.00
Totals.....	351,706		\$2,979,589.88	339,156		\$5,926,188.34

Corn on hand March 1, 1917, 593,158 bushels; March 1, 1918, 220,022 bushels.

Wheat on hand March 1, 1917, 65,043 bushels; March 1, 1918, 5,324 bushels.

Prairie grass for pasture March 1, 1918: Acres fenced, 149,625; acres not fenced, 722.

* Forage after harvesting grain. † Product of 1916. ‡ Product of 1917.

SUMMARY.—SMITH COUNTY.

Showing quantity and value of farm products in the county for 1917 and 1918.

Products.	1917.		1918.	
	Quantity.	Value.	Quantity.	Value.
Field crops.....acres	351,706	\$2,979,589.88	339,156	\$5,926,188.34
Animals slaughtered or sold for slaughter.....		1,758,389.00		1,783,680.00
Poultry and eggs sold.....		254,216.00		241,733.00
Wool clip.....lbs.	4,653	1,302.84	3,515	1,898.10
Cheese.....lbs.	30	5.10		
Butter.....lbs.	310,264	93,079.20	262,864	102,516.96
Condensed milk.....lbs.				
Milk sold.....		168,763.00		249,753.00
Honey and beeswax.....lbs.	11,423	2,056.14	3,420	855.05
Wood marketed.....		395.00		35.00
Totals.....		\$5,257,796.16		\$8,306,659.45

Number of cream separators March 1, 1917, 1,546; March 1, 1918, 1,595.

Number of silos March 1, 1917, 68; March 1, 1918, 84.

Number of tractors March 1, 1917, 27; March 1, 1918, 34.

STAFFORD COUNTY.

Organized in 1879; area, 505,899 acres; population, 11,272; rank in population, 61; assessed valuation, \$31,654,912; miles of railroad, main track, 67.41; county seat, St. John; population, 1,504.

POPULATION AND VALUATION.—STAFFORD COUNTY.

Table showing total population, by townships and cities, for 1917 and 1918, and the assessed valuation of the municipal townships and cities of 1918.

Townships (and cities).	Population.		Assessed valuation of property, 1918.				
	1917.	1918.	Land.	City lots.	Personal.	Railroad, etc.	Total.
The county	11,069	11,272	\$18,839,300	\$1,984,075	\$8,437,325	\$2,394,212	\$31,654,912
Albans tp.	279	289	\$699,069	.....	\$328,115	\$602	\$1,027,786
Byron tp.	331	325	534,960	.....	240,050	.....	775,010
Clear Creek tp.	258	264	433,514	.....	179,340	.....	612,854
Cleveland tp.	299	337	972,622	.....	288,660	.....	1,261,282
East Cooper tp.	291	325	965,800	.....	264,095	.....	1,229,895
West Cooper tp.	310	316	705,970	.....	253,845	165,873	1,125,688
Douglas tp.	356	358	823,622	\$6,390	262,765	76,708	1,169,485
Fairview tp.	391	416	1,193,034	12,325	449,130	78,980	1,733,469
Macksville.	764	735	.....	302,500	467,810	25,650	795,960
Farmington tp.	282	307	1,018,737	.....	234,335	244,090	1,497,162
Hudson.	188	233	.....	133,855	155,290	18,500	307,645
Hayes tp.	298	303	837,715	1,260	297,235	62,912	1,199,122
Lincoln tp.	328	326	1,067,671	.....	302,610	78,263	1,448,544
Ohio tp.	314	333	884,030	.....	254,055	213,420	1,351,505
Putnam tp.	250	287	804,498	.....	183,160	400	988,058
Richland tp.	337	352	988,000	.....	370,560	272,503	1,631,063
Rose Valley tp.	335	377	1,064,420	.....	351,260	298	1,415,978
North Seward tp.	500	460	880,685	31,100	340,815	200,238	1,452,838
South Seward tp.	336	356	901,268	.....	323,555	.....	1,224,823
St. John.	1,551	1,504	.....	747,390	928,270	90,232	1,765,892
St. John tp.	292	309	895,148	.....	215,225	.....	1,110,373
Stafford.	1,588	1,526	.....	745,010	813,665	134,471	1,693,146
Stafford tp.	408	431	1,238,921	4,245	361,615	300,305	1,905,086
Union tp.	412	424	1,060,583	.....	312,005	1,745	1,374,333
York tp.	371	379	869,033	.....	259,860	429,022	1,557,915

LIVESTOCK.—STAFFORD COUNTY.

Table showing number, value and mortality of livestock in the county for 1917 and 1918.

Livestock.	1917.		1918.		Mortality.	
	Number.	Value.	Number.	Value.	1917.	1918.
Horses	9,447	\$1,133,640.00	9,330	\$1,035,630.00	212	439
Mules and asses	5,192	700,920.00	4,881	683,340.00	30	58
Milk cows	4,556	341,700.00	5,417	444,194.00	59	176
Other cattle	14,730	736,500.00	15,301	826,254.00	145	555
Sheep	1,216	13,376.00	1,879	23,487.50	1	18
Swine	6,544	134,152.00	12,017	270,382.50	133	187
Totals	41,685	\$3,060,288.00	48,825	\$3,283,288.00	580	1,433

Number of dogs in county March 1, 1917, 1,217; March 1, 1918, 1,416.

Number of sheep killed by wolves, year ending March 1, 1917, 2.

Mortality of swine from cholera, year ending March 1, 1917, 58; March 1, 1918, 21.

FARM AND CROP STATISTICS.—STAFFORD COUNTY.

Table showing acres, product and value of field crops in the county for 1917 and 1918.

Crops.	1917.			1918.		
	Acres.	Product.	Value.	Acres.	Product.	Value.
Winter wheat.....bu.	84,897	1,103,661	\$2,174,212.17	214,965	3,224,475	\$6,416,705.25
Spring wheat.....bu.						
Corn.....bu.	184,593	3,507,267	4,068,429.72	76,391	993,083	1,390,316.20
Oats.....bu.	18,708	486,408	355,077.84	7,249	181,225	132,294.25
Rye.....bu.	1,531	21,435	34,296.00	5,559	72,267	112,013.85
Barley.....bu.	1,897	22,764	22,764.00	518	7,770	7,770.00
Emmer ("speltz").....bu.						
Irish potatoes.....bu.	368	14,720	22,080.00	414	7,452	12,295.80
Sweet potatoes.....bu.	1	80	160.00	3	75	150.00
Cowpeas.....tons	4	5	80.00	25	38	627.00
Flax.....bu.						
Broom corn.....lbs.	105	31,500	4,252.50	70	21,000	2,520.00
Millet.....tons	96	168	1,680.00	144	216	2,592.00
Sugar beets.....tons						
Sorghum for syrup.....gals.	7			22	440	484.00
for seed.....bu.	418	4,598	8,276.40	1,004	11,044	20,983.60
for hay.....tons	10,096	25,240	151,440.00	4,896	9,792	78,336.00
Milo for grain.....bu.	2,031	40,620	52,806.00	422	5,064	7,849.20
for stover*.....tons		2,031	8,124.00		844	5,064.00
for hay.....tons	58	87	565.50	102	230	1,840.00
Kafir for grain.....bu.	13,946	209,190	303,325.50	6,201	74,412	115,338.60
for stover*.....tons		27,892	139,460.00		12,402	68,211.00
for hay.....tons	1,213	2,729	16,374.00	1,428	3,213	22,491.00
Feterita for grain.....bu.	95	1,425	2,066.25	49	686	1,029.00
for stover*.....tons		95	380.00		98	588.00
for hay.....tons	34	51	357.00	62	155	1,240.00
Sudan grass.....tons	205	308	2,772.00	586	1,613	16,130.00
Jerusalem corn.....tons						
Alfalfa.....tons	7,010	18,226	309,842.00	8,435	23,196	463,920.00
Timothy.....tons				3		
Clover.....tons				9		
Blue grass.....tons						
Sweet clover.....tons	70	†		48	‡	75
Orchard grass.....tons						1,425.00
Other tame grasses.....tons				4		
Prairie hay.....tons	4,830	4,830	57,960.00	4,502	4,502	67,530.00
Totals.....	332,213		\$7,736,780.88	333,111		\$8,949,743.75

Corn on hand March 1, 1917, 142,273 bushels; March 1, 1918, 743,117 bushels.

Wheat on hand March 1, 1917, 172,688 bushels; March 1, 1918, 69,262 bushels.

Prairie grass for pasture March 1, 1918: Acres fenced, 85,988; acres not fenced, 2,753.

* Forage after harvesting grain. † Product of 1916. ‡ Product of 1917.

SUMMARY.—STAFFORD COUNTY.

Showing quantity and value of farm products in the county for 1917 and 1918.

Products.	1917.		1918.	
	Quantity.	Value.	Quantity.	Value.
Field crops.....acres	332,213	\$7,736,780.88	333,111	\$8,749,743.75
Animals slaughtered or sold for slaughter.....		243,373.00		386,516.00
Poultry and eggs sold.....		107,208.00		109,593.00
Wool clip.....lbs.	2,899	811.72	1,558	841.32
Cheese.....lbs.				
Butter.....lbs.	170,908	51,272.40	180,033	70,212.87
Condensed milk.....lbs.				
Milk sold.....		41,264.00		64,797.00
Honey and beeswax.....lbs.	3,335	603.30	5,021	1,255.25
Wood marketed.....		10.00		
Totals.....		\$8,181,323.30		\$9,582,959.19

Number of cream separators March 1, 1917, 777; March 1, 1918, 814.

Number of silos March 1, 1917, 84; March 1, 1918, 117.

Number of tractors March 1, 1917, 51; March 1, 1918, 53.

STANTON COUNTY.

Organized in 1887; area, 434,520 acres; population, 1,016; rank in population, 105; assessed valuation, \$3,552,493; county seat, Johnson.

POPULATION AND VALUATION.—STANTON COUNTY.

Table showing total population, by townships and cities, for 1917 and 1918, and the assessed valuation of the municipal townships and cities of 1918.

Townships (and cities).	Population.		Assessed valuation of property, 1918.				
	1917.	1918.	Land.	City lots.	Personal.	Railroad, etc.	Total.
The county.....	969	1,016	\$2,413,390	\$11,985	\$1,126,985	\$133	\$3,552,493
Mitchell tp.....	333	330	\$801,385	.....	\$411,919	\$133	\$1,213,437
Roanoke tp.....	318	352	802,600	.....	278,416	.....	1,081,016
Stanton tp.....	318	334	809,405	\$11,985	436,650	.....	1,258,040

LIVESTOCK.—STANTON COUNTY.

Table showing number, value and mortality of livestock in the county for 1917 and 1918.

Livestock.	1917.		1918.		Mortality.	
	Number.	Value.	Number.	Value.	1917.	1918.
Horses.....	2,495	\$299,400.00	2,962	\$328,782.00	53	55
Mules and asses.....	505	68,175.00	485	67,900.00	5	3
Milk cows.....	350	26,250.00	530	43,460.00	3	9
Other cattle.....	12,597	629,850.00	13,080	706,320.00	218	357
Sheep.....	248	2,728.00	345	4,312.50	1	.....
Swine.....	404	8,282.00	602	13,545.00	41	51
Totals.....	16,599	\$1,034,685.00	18,004	\$1,164,319.50	321	475

Number of dogs in county March 1, 1917, 139; March 1, 1918, 139.

Number of sheep killed by dogs, year ending March 1, 1918, 13.

Number of sheep killed by wolves, year ending March 1, 1918, 1.

Mortality of swine from cholera, year ending March 1, 1918, 9.

FARM AND CROP STATISTICS.—STANTON COUNTY.

Table showing acres, product and value of field crops in the county for 1917 and 1918.

Crops.	1917.			1918.		
	Acres.	Product.	Value.	Acres.	Product.	Value.
Winter wheat.....bu.	5			30	150	\$295.50
Spring wheat.....bu.						
Corn.....bu.	399	2,793	\$3,826.41	1,107	11,070	16,605.00
Oats.....bu.						
Rye.....bu.	155	1,240	2,046.00			
Barley.....bu.	169	1,690	1,690.00	82	820	779.00
Emmer ("speltz").....bu.						
Irish potatoes.....bu.						
Sweet potatoes.....bu.						
Cowpeas.....tons	15	19	304.00			
Flax.....bu.						
Broom corn.....lbs.	6,988	2,006,400	272,532.00	4,257	1,277,100	108,553.50
Millet.....tons						
Sugar beets.....tons						
Sorghum for syrup.....gals.	1			6		
for seed.....bu.	2,243	20,187	31,895.46	2,367	28,404	49,707.00
for hay.....tons	3,168	6,336	44,352.00	2,462	4,309	38,781.00
Milo for grain.....bu.	5,564	66,768	110,834.88	8,106	105,378	158,067.00
for stover*.....tons		5,564	27,820.00		10,133	50,665.00
for hay.....tons						
Kafir for grain.....bu.	3,185	31,850	47,775.00	5,082	55,902	83,853.00
for stover*.....tons		5,573	27,865.00		8,894	62,258.00
for hay.....tons				25	50	425.00
Feterita for grain.....bu.	293	2,930	4,102.00	435	6,090	8,526.00
for stover*.....tons		293	1,758.00		435	2,175.00
for hay.....tons	105	210	1,260.00			
Sudan grass.....tons	89	178	1,424.00	126	252	2,520.00
Jerusalem corn.....tons	20	25	225.00			
Alfalfa.....tons						
Timothy.....tons						
Clover.....tons						
Blue grass.....tons						
Sweet clover.....tons	3	†			‡	
Orchard grass.....tons						
Other tame grasses.....tons						
Prairie hay.....tons						
Totals.....	22,402		\$579,709.75	24,085		\$583,210.00

Corn on hand March 1, 1917, 1,000 bushels; March 1, 1918, 788 bushels.

Prairie grass for pasture March 1, 1918: Acres fenced, 53,615; acres not fenced, 11,507.

* Forage after harvesting grain. † Product of 1916. ‡ Product of 1917.

SUMMARY.—STANTON COUNTY.

Showing quantity and value of farm products in the county for 1917 and 1918.

Products.	1917.		1918.	
	Quantity.	Value.	Quantity.	Value.
Field crops.....acres	22,402	\$579,709.75	24,085	\$583,210.00
Animals slaughtered or sold for slaughter.....		25,437.00		21,858.00
Poultry and eggs sold.....		5,928.00		6,450.00
Wool clip.....lbs.				
Cheese.....lbs.				
Butter.....lbs.	13,211	3,963.30	12,975	5,060.25
Condensed milk.....lbs.				
Milk sold.....		2,240.00		4,689.00
Honey and beeswax.....lbs.				
Wood marketed.....				
Totals.....		\$617,278.05		\$621,267.25

Number of cream separators March 1, 1917, 42; March 1, 1918, 58.

Number of silos March 1, 1917, 3; March 1, 1918, 3.

Number of tractors March 1, 1917, 8; March 1, 1918, 9.

STEVENS COUNTY.

Organized in 1886; area, 464,754 acres; population, 3,331; rank in population, 94; assessed valuation, \$7,162,733; miles of railroad, main track, 31.20; county seat, Hugoton; population, 553.

POPULATION AND VALUATION.—STEVENS COUNTY.

Table showing total population, by townships and cities, for 1917 and 1918, and the assessed valuation of the municipal townships and cities of 1918.

Townships (and cities).	Population.		Assessed valuation of property, 1918.				
	1917.	1918.	Land.	City lots.	Personal.	Railroad, etc.	Total.
The county.....	3,099	3,331	\$4,602,106	\$265,730	\$1,722,187	\$572,710	\$7,162,733
Hugoton.....	508	553	.....	\$217,875	\$286,993	\$17,818	\$522,686
Center tp.....	761	767	\$1,386,925	.....	394,008	312,668	2,093,601
Harmony tp.....	780	924	1,805,348	47,855	580,668	242,224	2,676,095
Voorhees tp.....	1,050	1,087	1,409,833	.....	460,518	.....	1,870,351

LIVESTOCK.—STEVENS COUNTY.

Table showing number, value and mortality of livestock in the county for 1917 and 1918.

Livestock.	1917.		1918.		Mortality.	
	Number.	Value.	Number.	Value.	1917.	1918.
Horses.....	3,896	\$467,520.00	4,693	\$520,923.00	76	183
Mules and asses.....	1,057	142,695.00	1,128	157,920.00	12	28
Milk cows.....	919	68,925.00	1,972	161,704.00	20	94
Other cattle.....	8,777	438,850.00	10,290	555,660.00	146	417
Sheep.....	21	231.00	105	1,312.50	5	.....
Swine.....	2,243	45,981.50	2,244	50,490.00	65	61
Totals.....	16,913	\$1,164,202.50	20,432	\$1,448,009.50	324	783

Number of dogs in county March 1, 1917, 269; March 1, 1918, 323.

Number of sheep killed by dogs, year ending March 1, 1917, 2.

Mortality of swine from cholera, year ending March 1, 1918, 2.

FARM AND CROP STATISTICS.—STEVENS COUNTY.

Table showing acres, product and value of field crops in the county for 1917 and 1918.

Crops.	1917.			1918.		
	Acres.	Product.	Value.	Acres.	Product.	Value.
Winter wheat.....bu.	3,617	18,085	\$38,521.05	7,850	62,800	\$124,972.00
Spring wheat.....bu.						
Corn.....bu.	7,183	93,379	126,995.44	3,501	28,008	40,611.60
Oats.....bu.	1,972			1,113	3,339	2,671.20
Rye.....bu.	1,641	4,923	7,876.80	668	6,680	11,022.00
Barley.....bu.	4,116	28,812	28,812.00	557	5,013	4,762.35
Emmer ("speltz").....bu.						
Irish potatoes.....bu.	69			89	1,780	2,670.00
Sweet potatoes.....bu.	1	75	150.00			
Cowpeas.....tons	7	9	144.00	2	3	49.50
Flax.....bu.						
Broom corn.....lbs.	11,893	3,567,900	463,827.00	11,299	3,457,494	311,174.46
Millet.....tons	61	61	671.00	10	10	110.00
Sugar beets.....tons						
Sorghum for syrup.....gals.	50			15		
for seed.....bu.	1,908	20,988	32,111.64	11,887	166,418	282,910.60
for hay.....tons	8,882	15,544	108,808.00	2,306	5,756	46,120.00
Milo for grain.....bu.	33,446	535,136	727,784.96	30,708	552,744	801,478.80
for stover*.....tons		33,446	167,230.00		69,093	345,465.00
for hay.....tons				280	630	4,095.00
Kafir for grain.....bu.	19,674	334,458	448,173.72	25,645	435,965	636,503.90
for stover*.....tons		34,428	172,140.00		51,290	307,740.00
for hay.....tons	82	164	1,148.00	1,830	4,575	38,887.50
Feterita for grain.....bu.	3,838	49,894	70,350.54	1,977	31,632	44,284.80
for stover*.....tons		2,878	14,390.00		5,437	29,903.50
for hay.....tons	83	41	246.00	561	1,543	11,572.50
Sudan grass.....tons	191	478	4,541.00	347	781	8,200.50
Jerusalem corn.....tons						
Alfalfa.....tons						
Timothy.....tons						
Clover.....tons						
Blue grass.....tons						
Sweet clover.....tons	1	†			‡	
Orchard grass.....tons						
Other tame grasses.....tons						
Prairie hay.....tons	350	262	3,668.00			
Totals.....	99,065		\$2,417,589.15	100,645		\$3,055,210.21

Corn on hand March 1, 1917, 9,824 bushels; March 1, 1918, 6,045 bushels.

Wheat on hand March 1, 1917, 2,690 bushels; March 1, 1918, 606 bushels.

Prairie grass for pasture March 1, 1918: Acres fenced, 106,899; acres not fenced, 14,080.

* Forage after harvesting grain. † Product of 1916. ‡ Product of 1917.

SUMMARY.—STEVENS COUNTY.

Showing quantity and value of farm products in the county for 1917 and 1918.

Products.	1917.		1918.	
	Quantity.	Value.	Quantity.	Value.
Field crops.....acres	99,065	\$2,417,589.15	100,645	\$3,055,210.21
Animals slaughtered or sold for slaughter.....		49,396.00		118,741.00
Poultry and eggs sold.....		12,374.00		12,243.00
Wool clip.....lbs.				
Cheese.....lbs.	20	3.40		
Butter.....lbs.	26,791	8,037.30	27,749	10,822.11
Condensed milk.....lbs.				
Milk sold.....		7,993.00		21,334.00
Honey and beeswax.....lbs.				
Wood marketed.....				
Totals.....		\$2,495,392.85		\$3,218,350.32

Number of cream separators March 1, 1917, 108; March 1, 1918, 152.

Number of silos March 1, 1917, 18; March 1, 1918, 19.

Number of tractors March 1, 1917, 12; March 1, 1918, 21.

SUMNER COUNTY.

Organized in 1871; area, 756,592 acres; population, 26,277; rank in population, 13; assessed valuation, \$63,309,652; miles of railroad, main track, 280.74; county seat, Wellington; population, 5,507.

POPULATION AND VALUATION.—SUMNER COUNTY.

Table showing total population, by townships and cities, for 1917 and 1918, and the assessed valuation of the municipal townships and cities of 1918.

Townships (and cities).	Population.		Assessed valuation of property, 1918.				
	1917.	1918.	Land.	City lots.	Personal.	Railroad, etc.	Total.
The county.....	27,568	26,277	\$32,553,226	\$6,913,586	\$14,389,350	\$9,453,490	\$63,309,652
Avon tp.....	409	436	\$993,720	\$7,597	\$203,030	\$453,494	\$1,657,841
Belle Plaine.....	714 620	634 580	1,214	343,425	246,850	62,276	652,551
Belle Plaine tp.....	1,334	1,214	1,748,870	.....	525,135	632,879	2,906,884
Bluff tp.....	557	570	1,273,740	1,330	323,245	27,540	1,625,855
Caldwell.....	1,953	1,864	2,542	1,042,710	837,970	171,859	2,052,539
Caldwell tp.....	655	678	1,884,895	.....	259,335	282,099	1,926,329
Chikaskia tp.....	315	345	902,720	.....	208,265	.....	1,110,985
Conway Springs.....	1,100	852	.....	338,199	353,340	81,418	772,957
Conway tp.....	483	1,583	980,380	14,580	260,520	221,652	1,477,132
Creek tp.....	385	383	809,900	.....	234,140	93,530	1,137,570
Argonia.....	451	437	.....	164,600	159,680	39,548	363,828
Dixon tp.....	429	880	848,030	.....	194,865	394,488	1,437,383
Downs tp.....	635	587	987,280	26,260	257,145	538,983	1,800,668
Eden tp.....	467	459	984,200	30,150	276,870	318,476	1,609,696
Falls tp.....	668	612	1,396,640	24,455	339,005	368,308	2,128,408
Mulvane*.....	750	674	.....	443,220	491,500	88,858	1,023,578
Gore tp.....	540	535	979,880	.....	307,740	533,237	1,820,947
Greene tp.....	386	353	848,050	.....	280,800	275	1,129,125
Guelph tp.....	642	629	1,424,176	9,080	314,025	23,615	1,770,896
Harmon tp.....	412	409	869,880	2,135	226,700	368,167	1,466,882
Illinois tp.....	402	410	954,920	5,930	232,285	127,235	1,320,370
Jackson tp.....	446	434	1,027,850	9,420	243,180	227,784	1,508,234
London tp.....	553	580	1,284,185	24,500	389,830	321,825	2,020,340
Morris tp.....	351	359	793,100	.....	164,550	1,514	959,164
Osborne tp.....	518	473	976,090	32,605	311,705	277,707	1,598,107
Oxford.....	603	547	.....	252,835	337,540	67,153	657,528
Oxford tp.....	477	1,080	1,313,940	.....	371,000	427,241	2,112,181
Palestine tp.....	499	476	1,192,500	.....	336,895	191,272	1,720,667
Milan.....	220	223	.....	86,270	92,130	16,552	194,952
Ryan tp.....	394	385	906,860	.....	310,345	250,447	1,467,652
Seventy-six tp.....	518	538	1,051,240	5,060	191,420	470,514	1,718,234
Hunnell.....	173	196	.....	66,665	93,420	30,949	191,034
South Haven.....	380	405	.....	148,345	140,360	46,686	335,391
South Haven tp.....	702	687	1,428,940	.....	360,520	185,463	2,074,923
Springdale tp.....	401	372	823,800	2,840	206,640	186,871	1,220,151
Sumner tp.....	448	458	937,890	12,590	309,920	160,566	1,420,966
Valverde tp.....	443	461	954,080	3,020	282,080	67,727	1,306,907
Geuda Springs.....	218	204	.....	130,030	50,030	7,947	188,007
Walton tp.....	724	722	1,354,920	13,240	366,915	44,447	1,779,522
Wellington.....	6,055	5,507	.....	3,653,785	3,105,925	747,286	7,506,996
Wellington tp.....	472	467	1,120,550	18,710	192,500	795,512	2,127,272

*See Sedgwick County also.

LIVESTOCK.—SUMNER COUNTY.

Table showing number, value and mortality of livestock in the county for 1917 and 1918.

Livestock.	1917.		1918.		Mortality.	
	Number.	Value.	Number.	Value.	1917.	1918.
Horses.....	19,044	\$2,285,280.00	18,927	\$2,100,897.00	533	655
Mules and asses.....	5,495	741,825.00	5,262	736,680.00	34	38
Milk cows.....	9,505	712,875.00	10,691	876,662.00	175	347
Other cattle.....	29,005	1,450,250.00	29,899	1,614,546.00	685	1,200
Sheep.....	6,234	68,574.00	7,322	91,525.00	174	225
Swine.....	22,009	451,184.50	23,299	524,227.50	946	932
Totals.....	91,292	\$5,709,988.50	95,400	\$5,944,537.50	2,547	3,406

Number of dogs in county March 1, 1917, 2,163; March 1, 1918, 2,789.

Number of sheep killed by dogs, year ending March 1, 1917, 46; March 1, 1918, 42.

Number of sheep killed by wolves, year ending March 1, 1917, 17; March 1, 1918, 29.

Mortality of swine from cholera, year ending March 1, 1917, 761; March 1, 1918, 345.

FARM AND CROP STATISTICS.—SUMNER COUNTY.

Table showing acres, product and value of field crops in the county for 1917 and 1918.

Crops.	1917.			1918.		
	Acres.	Product.	Value.	Acres.	Product.	Value.
Winter wheat.....bu.	226,998	3,631,968	\$7,627,132.80	235,330	4,235,940	\$8,471,880.00
Spring wheat.....bu.						
Corn.....bu.	110,643	553,215	691,518.75	71,767	358,835	538,252.50
Oats.....bu.	58,251	1,339,773	870,852.45	88,588	2,303,288	1,681,400.24
Rye.....bu.	13,236	211,776	340,959.36	7,358	110,370	176,592.00
Barley.....bu.	36	720	720.00	44	1,232	1,355.20
Emmer ("speltz").....bu.	2	42	29.40			
Irish potatoes.....bu.	622	32,344	47,545.68	825	28,875	44,756.25
Sweet potatoes.....bu.	33	2,706	4,816.68	32	1,696	3,222.40
Cowpeas.....tons	149	186	2,976.00	78	117	1,930.50
Flax.....bu.	70	420	1,134.00	2	8	26.00
Broom corn.....lbs	615	276,750	41,512.50	354	123,900	15,487.50
Millet.....tons	1,058	1,852	20,372.00	813	1,626	19,512.00
Sugar beets.....tons	6	54	297.00	22	132	1,254.00
Sorghum for syrup.....gals.	3	120	84.00	74	1,480	1,628.00
for seed.....bu.	733	7,330	10,701.80	1,043	10,430	20,860.00
for hay.....tons	3,251	10,566	73,962.00	5,085	13,984	104,880.00
Milo for grain.....bu.	248	5,208	6,249.60	429	4,719	7,314.45
for stover*.....tons		620	1,860.00		858	3,432.00
for hay.....tons	99	272	1,632.00	5	13	71.50
Kafir for grain.....bu.	28,573	514,314	699,467.04	41,701	375,309	581,728.95
for stover*.....tons		71,432	285,728.00		104,253	521,265.00
for hay.....tons	392	1,372	8,918.00	732	1,830	11,895.00
Peterita for grain.....bu.	1,514	28,766	37,395.80	4,802	62,426	96,760.30
for stover*.....tons		4,921	17,223.50		13,206	52,824.00
for hay.....tons	370	1,110	6,105.00	228	741	4,446.00
Sudan grass.....tons	1,437	5,030	42,755.00	3,918	10,775	107,750.00
Jerusalem corn.....tons				118	295	1,917.50
Alfalfa.....tons	22,978	68,934	1,309,746.00	25,841	77,523	1,550,460.00
Timothy.....tons						
Clover.....tons	3			22		
Blue grass.....tons	42	† 900	13,500.00	8	‡ 700	13,300.00
Sweet clover.....tons	804			709		
Orchard grass.....tons	8			8		
Other tame grasses.....tons	49			10		
Prairie hay.....tons	10,892	10,892	152,488.00	10,394	10,394	166,304.00
Totals.....	483,115		\$12,317,682.36	500,340		\$14,202,505.29

Corn on hand March 1, 1917, 98,259 bushels; March 1, 1918, 113,954 bushels.

Wheat on hand March 1, 1917, 58,497 bushels; March 1, 1918, 156,689 bushels.

Prairie grass for pasture March 1, 1918: Acres fenced, 134,209; acres not fenced, 100.

* Forage after harvesting grain. † Product of 1916. ‡ Product of 1917.

SUMMARY.—SUMNER COUNTY.

Showing quantity and value of farm products in the county for 1917 and 1918.

Products.	1917.		1918.	
	Quantity.	Value.	Quantity.	Value.
Field crops.....acres	483,115	\$12,317,682.36	500,340	\$14,202,505.29
Animals slaughtered or sold for slaughter.....		1,070,337.00		1,500,542.00
Poultry and eggs sold.....		232,944.00		239,718.00
Wool clip.....lbs.	10,485	2,935.80	12,250	6,615.00
Cheese.....lbs.	100	17.00	50	9.00
Butter.....lbs.	379,503	114,024.90	394,093	157,087.86
Condensed milk.....lbs.	7,584,870	455,092.20	8,810,496	791,182.54
Milk sold.....		205,203.00		314,821.00
Honey and beeswax.....lbs.	20,286	3,652.28	7,871	1,972.75
Wood marketed.....		562.00		1,039.00
Totals.....		\$14,402,450.54		\$17,215,492.44

Number of cream separators March 1, 1917, 1,568; March 1, 1918, 1,724.

Number of silos March 1, 1917, 326; March 1, 1918, 345.

Number of tractors March 1, 1917, 104; March 1, 1918, 162.

THOMAS COUNTY.

Organized in 1885; area, 687,145 acres; population, 5,008; rank in population, 87; assessed valuation, \$13,298,968; miles of railroad, main track, 76.06; county seat, Colby; population, 1,022.

POPULATION AND VALUATION.—THOMAS COUNTY.

Table showing total population, by townships and cities, for 1917 and 1918, and the assessed valuation of the municipal townships and cities of 1918.

Townships (and cities).	Population.		Assessed valuation of property, 1918.				
	1917.	1918.	Land.	City lots.	Personal.	Railroad, etc.	Total.
The county.....	5,046	5,008	\$6,806,230	\$523,940	\$2,881,570	\$3,087,228	\$13,298,968
Barrett tp.....	332	304	\$660,430	.....	\$195,630	\$600	\$856,660
Hale tp.....	469	484	694,790	\$56,410	301,110	646,685	1,698,995
Kingery tp.....	348	344	836,000	.....	185,310	1,192	1,022,502
Lacey tp.....	251	269	232,990	19,698	138,950	325,439	717,077
Menlo tp.....	319	310	346,220	19,420	176,970	177,892	720,502
Colby.....	1,039	1,022	.....	380,470	636,170	128,563	1,145,203
Morgan tp.....	321	310	731,590	.....	156,030	923,639	1,811,259
North Randall tp..	201	200	330,880	1,130	107,780	168,927	608,717
South Randall tp..	342	386	705,640	.....	220,940	241,223	1,167,803
Revol tp.....	336	330	668,080	880	159,430	979	829,369
Smith tp.....	389	384	301,680	42,342	219,260	337,608	900,890
Summers tp.....	376	356	872,810	3,590	235,090	133,794	1,245,284
Wendell tp.....	323	309	425,120	.....	148,900	687	574,707

LIVESTOCK.—THOMAS COUNTY.

Table showing number, value and mortality of livestock in the county for 1917 and 1918.

Livestock.	1917.		1918.		Mortality.	
	Number.	Value.	Number.	Value.	1917.	1918.
Horses.....	8,385	\$1,006,200.00	8,868	\$984,348.00	170	127
Mules and asses.....	1,521	205,335.00	1,149	160,860.00	7	12
Milk cows.....	3,951	296,325.00	5,104	418,528.00	69	61
Other cattle.....	12,991	649,550.00	15,530	838,620.00	274	232
Sheep.....	1,157	12,727.00	560	7,000.00	10	5
Swine.....	3,156	64,698.00	2,726	61,335.00	65	45
Totals.....	31,161	\$2,234,835.00	33,937	\$2,470,691.00	595	482

Number of dogs in county March 1, 1917, 524; March 1, 1918, 599.

Number of sheep killed by dogs, year ending March 1, 1917, 2.

Mortality of swine from cholera, year ending March 1, 1917, 24; March 1, 1918, 11.

FARM AND CROP STATISTICS.—THOMAS COUNTY.

Table showing acres, product and value of field crops in the county for 1917 and 1918.

Crops.	1917.			1918.		
	Acres.	Product.	Value.	Acres.	Product.	Value.
Winter wheat.....bu.	39,794	159,176	\$315,168.48	107,048	642,288	\$1,252,461.60
Spring wheat.....bu.	702	1,404	2,695.68	1,352	5,408	10,275.20
Corn.....bu.	68,552	411,312	514,140.00	43,731	87,462	119,822.94
Oats.....bu.	6,487	19,461	13,038.87	7,432	7,432	5,574.00
Rye.....bu.	125	375	656.25	94	376	601.60
Barley.....bu.	62,250	373,500	373,500.00	59,009	413,063	392,409.85
Emmer ("speltz").....bu.						
Irish potatoes.....bu.	246	9,348	14,022.00	236	7,080	10,266.00
Sweet potatoes.....bu.						
Cowpeas.....tons						
Flax.....bu.						
Broom corn.....lbs.				96	28,800	2,880.00
Millet.....tons	2,097	1,573	17,303.00	3,083	2,312	23,120.00
Sugar beets.....tons						
Sorghum for syrup.....gals.						
for seed.....bu.	174	348	591.60	594	4,752	8,933.76
for hay.....tons	24,870	31,088	279,792.00	23,396	29,245	263,205.00
Milo for grain.....bu.	16,920			4,593	36,744	53,278.80
for stover*.....tons		8,460	42,300.00		5,741	34,446.00
for hay.....tons	210	105	840.00	553	830	6,640.00
Kafir for grain.....bu.	12,195			8,193	24,579	38,097.45
for stover*.....tons		18,292	128,044.00		12,290	67,595.00
for hay.....tons	1,382	1,727	18,997.00	1,839	3,678	29,424.00
Feterita for grain.....bu.	7,113	21,339	32,008.50	351	2,457	3,685.50
for stover*.....tons		3,557	21,342.00		439	2,634.00
for hay.....tons	312	156	1,248.00	286	501	4,509.00
Sudan grass.....tons	191	287	3,157.00	711	1,244	13,062.00
Jerusalem corn.....tons	8	10	110.00			
Alfalfa.....tons	510	1,173	23,460.00	530	1,060	21,200.00
Timothy.....tons						
Clover.....tons						
Blue grass.....tons						
Sweet clover.....tons		†			†	
Orchard grass.....tons						
Other tame grasses.....tons						
Prairie hay.....tons	636	636	9,540.00	400	300	4,500.00
Totals.....	244,774		\$1,811,954.38	263,527		\$2,368,621.70

Corn on hand March 1, 1917, 34,586 bushels; March 1, 1918, 375 bushels.

Wheat on hand March 1, 1917, 103,046 bushels; March 1, 1918, 21,461 bushels.

Prairie grass for pasture March 1, 1918: Acres fenced, 219,798; acres not fenced 53,515.

* Forage after harvesting grain. † Product of 1916. ‡ Product of 1917.

SUMMARY.—THOMAS COUNTY.

Showing quantity and value of farm products in the county for 1917 and 1918.

Products.	1917.		1918.	
	Quantity.	Value.	Quantity.	Value.
Field crops.....acres	244,774	\$1,811,954.38	263,527	\$2,368,621.70
Animals slaughtered or sold for slaughter.....		136,610.00		198,597.00
Poultry and eggs sold.....		42,273.00		42,810.00
Wool clip.....lbs.	440	123.20	1,910	1,031.40
Cheese.....lbs.				
Butter.....lbs.	49,073	14,721.90	56,060	21,863.40
Condensed milk.....lbs.				
Milk sold.....		40,679.00		64,700.00
Honey and beeswax.....lbs.				
Wood marketed.....				525.00
Totals.....		\$2,046,361.48		\$2,698,148.50

Number of cream separators March 1, 1917, 366; March 1, 1918, 422.

Number of silos March 1, 1917, 35; March 1, 1918, 43.

Number of tractors March 1, 1917, 80; March 1, 1918, 85.

TREGO COUNTY.

Organized in 1879; area, 575,003 acres; population, 6,151; rank in population, 81; assessed valuation, \$12,442,641; miles of railroad, main track, 32.89; county seat, Wakeeney; population, 994.

POPULATION AND VALUATION.—TREGO COUNTY.

Table showing total population, by townships and cities, for 1917 and 1918, and the assessed valuation of the municipal townships and cities of 1918.

Townships (and cities).	Population.		Assessed valuation of property, 1918.				
	1917.	1918.	Land.	City lots.	Personal.	Railroad, etc.	Total.
The county	6,254	6,151	\$7,568,077	\$540,065	\$2,738,680	\$1,595,819	\$12,442,641
Collyer	171	158		\$64,990	\$113,475	\$59,172	\$237,637
Collyer tp	1,271	1,219	\$1,588,680	3,545	515,015	483,663	2,590,903
Franklin tp	267	335	701,148		110,325	532	812,005
Glencoe tp	271	283	366,242		109,415	220,948	696,605
Ogallah tp	938	917	1,353,281	38,425	497,250	312,151	2,201,107
Riverside tp	571	574	871,188		222,150	513	1,093,851
Wakeeney	1,149	994		429,345	451,650	69,469	950,464
Wakeeney tp	1,121	1,135	1,850,356	3,760	507,230	449,371	2,810,717
Wilcox tp	495	536	837,182		212,170		1,049,352

LIVESTOCK.—TREGO COUNTY.

Table showing number, value and mortality of livestock in the county for 1917 and 1918.

Livestock.	1917.		1918.		Mortality.	
	Number.	Value.	Number.	Value.	1917.	1918.
Horses	7,696	\$923,520.00	7,891	\$875,901.00	140	203
Mules and asses	1,370	184,950.00	1,087	152,180.00	16	9
Milk cows	3,144	235,800.00	3,954	324,228.00	83	57
Other cattle	21,497	1,074,850.00	16,469	889,326.00	474	488
Sheep	947	10,417.00	2,089	26,112.50	60	25
Swine	4,216	86,428.00	2,134	48,015.00	72	103
Totals	38,870	\$2,515,965.00	33,624	\$2,315,762.50	845	885

Number of dogs in county March 1, 1917, 486; March 1, 1918, 823.

Number of sheep killed by dogs, year ending March 1, 1917, 3; March 1, 1918, 19.

Number of sheep killed by wolves, year ending March 1, 1917, 17; March 1, 1918, 9.

Mortality of swine from cholera, year ending March 1, 1917, 1; March 1, 1918, 7.

FARM AND CROP STATISTICS.—TREGO COUNTY.

Table showing acres, product and value of field crops in the county for 1917 and 1918.

Crops.	1917.			1918.		
	Acres.	Product.	Value.	Acres.	Product.	Value.
Winter wheat.....bu.	13,655	40,965	\$86,436.12	86,563	519,378	\$986,818.20
Spring wheat.....bu.	76	76	155.80			
Corn.....bu.	100,208	400,832	452,940.16	42,455	169,820	254,730.00
Oats.....bu.	13,332			7,829	70,461	54,254.97
Rye.....bu.	142			361	1,805	2,978.25
Barley.....bu.	17,272			2,896	26,064	24,760.80
Emmer ("speltz").....bu.				45	360	295.20
Irish potatoes.....bu.	211	2,743	4,114.50	249	3,486	5,473.02
Sweet potatoes.....bu.						
Cowpeas.....tons						
Flax.....bu.						
Broom corn.....lbs.	20	5,000	675.00	6	1,800	180.00
Millet.....tons	3,505	3,505	42,060.00	2,654	2,654	31,848.00
Sugar beets.....tons						
Sorghum for syrup.....gals.	35			50		
for seed.....bu.	471	2,355	3,532.50	3,317	19,902	36,420.66
for hay.....tons	14,864	7,432	74,320.00	6,155	10,771	107,710.00
Milo for grain.....bu.	5,917	11,834	15,739.22	3,339	16,695	26,712.00
for stover*.....tons		2,958	16,269.00		5,009	32,558.50
for hay.....tons	96			50	88	704.00
Kafir for grain.....bu.	18,337	36,674	55,011.00	12,523	87,661	140,257.60
for stover*.....tons		18,337	128,359.00		21,915	175,320.00
for hay.....tons	124	124	1,364.00	748	1,496	13,464.00
Feterita for grain.....bu.	5,009	10,018	13,724.66	1,285	6,425	9,958.75
for stover*.....tons		5,009	32,558.50		1,928	12,532.00
for hay.....tons	263	66	528.00	511	1,022	9,198.00
Sudan grass.....tons	227	284	3,408.00	935	1,403	16,836.00
Jerusalem corn.....tons	17	17	187.00	5	10	90.00
Alfalfa.....tons	1,046	1,674	36,828.00	1,162	2,615	52,300.00
Timothy.....tons						
Clover.....tons						
Blue grass.....tons						
Sweet clover.....tons	4	†			‡	
Orchard grass.....tons						
Other tame grasses.....tons						
Prairie hay.....tons	350	262	3,930.00	706	706	10,590.00
Totals.....	195,181		\$972,140.46	173,844		\$2,005,989.95

Corn on hand March 1, 1917, 28,220 bushels; March 1, 1918, 2,565 bushels.

Wheat on hand March 1, 1917, 114,025 bushels; March 1, 1918, 8,559 bushels.

Prairie grass for pasture March 1, 1918: Acres fenced, 210,872; acres not fenced, 55,772.

* Forage after harvesting grain. † Product of 1916. ‡ Product of 1917.

SUMMARY.—TREGO COUNTY.

Showing quantity and value of farm products in the county for 1917 and 1918.

Products.	1917.		1918.	
	Quantity.	Value.	Quantity.	Value.
Field crops.....acres	195,181	\$972,140.46	173,844	\$2,005,989.95
Animals slaughtered or sold for slaughter.....		231,560.00		223,223.00
Poultry and eggs sold.....		55,319.00		63,813.00
Wool clip.....lbs.			3,650	1,971.00
Cheese.....lbs.				
Butter.....lbs.	64,874	19,462.20	61,650	24,043.50
Condensed milk.....lbs.				
Milk sold.....		39,459.00		79,972.00
Honey and beeswax.....lbs.				
Wood marketed.....				25.00
Totals.....		\$1,317,940.66		\$2,399,037.45

Number of cream separators March 1, 1917, 487; March 1, 1918, 576.

Number of silos March 1, 1917, 51; March 1, 1918, 55.

Number of tractors March 1, 1917, 69; March 1, 1918, 47.

WABAUNSEE COUNTY.

Organized in 1859; area, 507,880 acres; population, 11,530; rank in population, 58; assessed valuation, \$29,107,393; miles of railroad, main track, 75.49; county seat, Alma; population, 810.

POPULATION AND VALUATION.—WABAUNSEE COUNTY.

Table showing total population, by townships and cities, for 1917 and 1918, and the assessed valuation of the municipal townships and cities of 1918.

Townships (and cities).	Population.		Assessed valuation of property, 1918.				
	1917.	1918.	Land.	City lots.	Personal.	Railroad, etc.	Total.
The county.....	11,799	11,530	\$17,403,367	\$1,363,370	\$6,541,460	\$3,799,196	\$29,107,393
Alma.....	850	810	.....	\$419,480	\$424,845	\$55,962	\$895,287
Alma tp.....	510	495	\$912,380	380	269,565	437,774	1,620,099
Farmer tp.....	300	287	1,056,695	.....	299,095	200,612	1,556,402
Alta Vista.....	478	454	.....	183,675	237,460	27,406	448,541
Garfield tp.....	466	455	944,740	.....	287,195	318,427	1,550,362
Kaw tp.....	688	640	1,472,323	.....	581,330	7,154	2,060,807
Maple Hill.....	273	235	.....	91,770	75,415	1,137	168,322
Maple Hill tp.....	720	671	1,822,019	.....	420,235	516,449	2,758,703
Mill Creek tp.....	473	450	1,136,300	2,710	246,100	291,591	1,676,701
Mission Creek tp..	966	968	1,588,940	.....	430,505	71,124	2,090,569
McFarland.....	468	485	.....	101,155	84,820	1,012	186,987
Paxico.....	234	217	.....	67,090	141,660	20,124	228,874
Newbury tp.....	951	780	1,952,206	.....	584,995	607,280	3,108,481
Harveyville.....	327	301	.....	119,550	188,695	11,075	319,320
Plumb tp.....	755	937	1,314,279	4,515	370,205	199,299	1,888,298
Rock Creek tp.....	631	652	1,017,951	.....	308,085	2,062	1,328,098
Waubsee tp.....	967	999	950,690	25,900	503,945	533,090	3,013,625
Washington tp.....	342	337	947,046	.....	353,055	300,289	1,600,390
Eskridge.....	756	682	.....	348,870	313,210	32,088	694,168
Wilmington tp....	644	666	1,287,798	3,275	421,045	165,241	1,877,359

LIVESTOCK.—WABAUNSEE COUNTY.

Table showing number, value and mortality of livestock in the county for 1917 and 1918.

Livestock.	1917.		1918.		Mortality.	
	Number.	Value.	Number.	Value.	1917.	1918.
Horses.....	8,852	\$1,062,240.00	8,878	\$985,458.00	84	78
Mules and asses.....	2,557	345,195.00	2,119	296,660.00	4	4
Milk cows.....	5,905	442,875.00	6,312	517,584.00	68	75
Other cattle.....	36,293	1,814,650.00	33,779	1,824,066.00	477	717
Sheep.....	4,638	51,018.00	3,795	47,437.50	10	3
Swine.....	15,868	325,294.00	21,775	489,937.50	342	381
Totals.....	74,113	\$4,041,272.00	76,658	\$4,161,143.00	985	1,258

Number of dogs in county March 1, 1917, 1,322; March 1, 1918, 1,464.

Number of sheep killed by dogs, year ending March 1, 1917, 6; March 1, 1918, 2.

Number of sheep killed by wolves, year ending March 1, 1917, 21; March 1, 1918, 10.

Mortality of swine from cholera, year ending March 1, 1917, 132; March 1, 1918, 188.

FARM AND CROP STATISTICS.—WABAUNSEE COUNTY.

Table showing acres, product and value of field crops in the county for 1917 and 1918.

Crops.	1917.			1918.		
	Acres.	Product.	Value.	Acres.	Product.	Value.
Winter wheat.....bu.	18,302	420,946	\$905,033.90	30,998	743,952	\$1,525,101.60
Spring wheat.....bu.				30	600	1,218.00
Corn.....bu.	67,233	1,411,893	1,510,725.51	55,154	551,540	799,733.00
Oats.....bu.	13,570	474,950	294,469.00	16,862	539,584	372,312.96
Rye.....bu.	708	14,868	24,829.56	1,129	23,709	37,223.13
Barley.....bu.	50	1,500	1,500.00	230	5,750	6,037.50
Emmer ("speltz").....bu.	5	165	110.55	40	1,200	888.00
Irish potatoes.....bu.	865	57,090	85,635.00	818	62,168	92,008.64
Sweet potatoes.....bu.	186	14,508	23,212.80	136	17,680	31,824.00
Cowpeas.....tons				2	3	49.50
Flax.....bu.				10	70	227.50
Broom corn.....lbs.	8	2,400	336.00			
Millet.....tons	865	1,946	17,514.00	1,141	2,567	28,237.00
Sugar beets.....tons				2	12	114.00
Sorghum for syrup.....gals.	41	2,665	1,865.50	51	3,825	4,207.50
for seed.....bu.	442	5,304	9,016.80	990	9,900	18,315.00
for hay.....tons	2,161	9,184	55,104.00	1,525	5,338	40,035.00
Milo for grain.....bu.	71	852	1,278.00	335	5,025	8,040.00
for stover*.....tons		213	639.00		670	3,350.00
for hay.....tons	5	12	72.00	8	20	130.00
Kafir for grain.....bu.	8,969	35,876	53,814.00	5,854	76,102	125,568.30
for stover*.....tons		35,876	143,504.00		19,026	133,182.00
for hay.....tons	148	592	3,256.00	105	473	4,020.50
Feterita for grain.....bu.	316	4,740	6,162.00	360	5,400	8,640.00
for stover*.....tons		632	3,160.00		1,080	5,400.00
for hay.....tons	130	390	2,340.00	89	267	1,869.00
Sudan grass.....tons	118	472	4,248.00	93	326	3,260.00
Jerusalem corn.....tons	5	20	110.00			
Alfalfa.....tons	23,905	69,325	1,247,850.00	26,918	67,295	1,480,490.00
Timothy.....tons	493			364		
Clover.....tons	1,011			392		
Blue grass.....tons	1,184			1,634		
Sweet clover.....tons	325	† 2,113	31,695.00	268	‡ 3,000	60,000.00
Orchard grass.....tons	21			5		
Other tame grasses.....tons	343			80		
Prairie hay.....tons	22,784	22,784	296,192.00	22,718	17,039	306,702.00
Totals.....	164,264		\$4,723,672.62	168,341		\$5,098,184.13

Corn on hand March 1, 1917, 77,297 bushels; March 1, 1918, 292,785 bushels.

Wheat on hand March 1, 1917, 6,220 bushels; March 1, 1918, 18,644 bushels.

Prairie grass for pasture March 1, 1918: Acres fenced, 201,968; acres not fenced, 40.

* Forage after harvesting grain. † Product of 1916. ‡ Product of 1917.

SUMMARY.—WABAUNSEE COUNTY.

Showing quantity and value of farm products in the county for 1917 and 1918.

Products.	1917.		1918.	
	Quantity.	Value.	Quantity.	Value.
Field crops.....acres	164,264	\$4,723,672.62	168,341	\$5,098,184.13
Animals slaughtered or sold for slaughter.....		2,294,887.00		3,161,067.00
Poultry and eggs sold.....		186,480.00		196,262.00
Wool clip.....lbs.	3,989	1,116.92	3,715	2,006.10
Cheese.....lbs.				
Butter.....lbs.	210,701	63,210.30	181,648	70,842.72
Condensed milk.....lbs.				
Milk sold.....		111,555.00		178,950.00
Honey and beeswax.....lbs.	24,563	4,474.94	10,410	2,618.00
Wood marketed.....		3,350.00		1,917.00
Totals.....		\$7,388,746.78		\$8,711,846.95

Number of cream separators March 1, 1917, 907; March 1, 1918, 982.

Number of silos March 1, 1917, 171; March 1, 1918, 186.

Number of tractors March 1, 1917, 50; March 1, 1918, 63.

WALLACE COUNTY.

Organized in 1888; area, 583,658 acres; population, 2,219; rank in population, 100; assessed valuation, \$6,572,768; miles of railroad, main track, 31.77; county seat, Sharon Springs; population, 628.

POPULATION AND VALUATION.—WALLACE COUNTY.

Table showing total population, by townships and cities, for 1917 and 1918, and the assessed valuation of the municipal townships and cities of 1918.

Townships (and cities).	Population.		Assessed valuation of property, 1918.				
	1917.	1918.	Land.	City lots.	Personal.	Railroad, etc.	Total.
The county.....	2,006	2,219	\$3,044,986	\$278,851	\$1,581,358	\$1,667,573	\$6,572,768
Harrison tp.....	136	159	\$241,400	.....	\$97,124	.....	\$338,524
Morton tp.....	229	307	397,273	.....	205,248	.....	602,521
North tp.....	39	34	269,122	.....	111,212	\$135	380,469
Sharon Springs.....	534	628	.....	\$241,385	200,632	46,196	488,213
Sharon Springs tp.	218	248	805,226	2,050	311,401	536,865	1,655,542
Stockholm tp.....	99	115	224,398	.....	95,414	.....	319,812
Wallace.....	331	316	544,290	21,234	246,649	476,482	1,288,655
Weskan tp.....	420	412	563,277	14,182	313,678	607,895	1,499,032

LIVESTOCK.—WALLACE COUNTY.

Table showing number, value and mortality of livestock in the county for 1917 and 1918.

Livestock.	1917.		1918.		Mortality.	
	Number.	Value.	Number.	Value.	1917.	1918.
Horses.....	5,153	\$618,360.00	5,840	\$648,240.00	86	108
Mules and asses.....	529	71,415.00	464	64,960.00	.....	6
Milk cows.....	1,845	138,375.00	2,505	205,410.00	20	45
Other cattle.....	14,875	743,750.00	11,392	615,168.00	125	295
Sheep.....	259	2,849.00	1,203	15,037.50	.....	3
Swine.....	2,038	41,779.00	814	18,315.00	10	41
Totals.....	24,699	\$1,616,528.00	22,218	\$1,567,130.50	241	498

Number of dogs in county March 1, 1917, 268; March 1, 1918, 214.

Number of sheep killed by dogs, year ending March 1, 1917, 3.

Mortality of swine from cholera, year ending March 1, 1917, 2; March 1, 1918, 6.

FARM AND CROP STATISTICS.—WALLACE COUNTY.

Table showing acres, product and value of field crops in the county for 1917 and 1918.

Crops.	1917.			1918.		
	Acres.	Product.	Value.	Acres.	Product.	Value.
Winter wheat.....bu.	458	2,290	\$4,694.50	1,184	9,472	\$17,996.80
Spring wheat.....bu.	654	1,308	2,602.92	338	2,248	4,248.72
Corn.....bu.	9,049	45,245	55,198.90	7,980	143,640	193,914.00
Oats.....bu.	133			575	7,475	5,606.25
Rye.....bu.	265			130	650	1,040.00
Barley.....bu.	5,467	43,736	43,736.00	6,584	125,096	112,586.40
Emmer ("speltz").....bu.	101			154	1,694	1,355.20
Irish potatoes.....bu.	33	594	861.30	121	3,025	4,235.00
Sweet potatoes.....bu.						
Cowpeas.....tons	1	1	16.00			
Flax.....bu.						
Broom corn.....lbs.	2,558	511,600	81,856.00	1,406	421,800	42,180.00
Millet.....tons	1,899	1,899	22,788.00	1,508	2,262	22,620.00
Sugar beets.....tons						
Sorghum for syrup.....gals.	30			52		
for seed.....bu.	371	1,484	2,404.08	1,647	23,058	41,504.40
for hay.....tons	3,317	3,317	33,170.00	3,848	7,696	69,264.00
Milo for grain.....bu.	717	4,302	5,377.50	1,178	16,492	23,913.40
for stover*.....tons		358	1,790.00		1,767	8,835.00
for hay.....tons	275	275	2,200.00	90	158	1,106.00
Kafir for grain.....bu.	1,436	4,308	6,892.80	1,536	13,824	21,841.92
for stover*.....tons		2,872	20,104.00		1,920	9,600.00
for hay.....tons	210	210	2,100.00	85	128	1,152.00
Feterita for grain.....bu.	242			164	1,640	2,460.00
for stover*.....tons		182	1,092.00		205	1,025.00
for hay.....tons	91	114	912.00	140	175	1,225.00
Sudan grass.....tons	131	197	2,364.00	734	1,468	14,680.00
Jerusalem corn.....tons	4	4	4.00			
Alfalfa.....tons	4,664	12,593	239,267.00	3,695	7,390	133,020.00
Timothy.....tons						
Clover.....tons						
Blue grass.....tons						
Sweet clover.....tons	155	† 150	2,250.00	17	‡	
Orchard grass.....tons						
Other tame grasses.....tons						
Prairie hay.....tons	2,735	2,735	41,025.00	3,291	3,291	52,656.00
Totals.....	34,996		\$572,706.00	36,457		\$788,065.09

Corn on hand March 1, 1917, 3,560 bushels; March 1, 1918, 2,010 bushels.

Wheat on hand March 1, 1917, 277 bushels; March 1, 1918, 25 bushels.

Prairie grass for pasture March 1, 1918: Acres fenced, 162,273; acres not fenced, 6,316.

* Forage after harvesting grain. † Product of 1916. ‡ Product of 1917.

SUMMARY.—WALLACE COUNTY.

Showing quantity and value of farm products in the county for 1917 and 1918.

Products.	1917.		1918.	
	Quantity.	Value.	Quantity.	Value.
Field crops.....acres	34,996	\$572,706.00	36,457	\$788,065.09
Animals slaughtered or sold for slaughter.....		113,489.00		221,445.00
Poultry and eggs sold.....		14,192.00		18,161.00
Wool clip.....lbs.	150	42.00	24	12.96
Cheese.....lbs.				
Butter.....lbs.	12,335	3,700.50	18,022	7,028.58
Condensed milk.....lbs.				
Milk sold.....		22,716.00		37,534.00
Honey and beeswax.....lbs.				
Wood marketed.....				7.00
Totals.....		\$726,845.50		\$1,072,253.63

Number of cream separators March 1, 1917, 211; March 1, 1918, 177.

Number of silos March 1, 1917, 24; March 1, 1918, 24.

Number of tractors March 1, 1917, 10; March 1, 1918, 11.

WASHINGTON COUNTY.

Organized in 1860; area, 572,232 acres; population, 18,606; rank in population, 29; assessed valuation, \$49,162,694; miles of railroad, main track, 106.56; county seat, Washington; population, 1,405.

POPULATION AND VALUATION.—WASHINGTON COUNTY.

Table showing total population, by townships and cities, for 1917 and 1918, and the assessed valuation of the municipal townships and cities of 1918.

Townships (and cities).	Population.		Assessed valuation of property, 1918.				
	1917.	1918.	Land.	City lots.	Personal.	Railroad, etc.	Total.
The county.....	18,869	18,606	\$30,034,147	\$2,648,800	\$12,906,590	\$3,573,157	\$49,162,694
Barnes.....	381	481	.....	\$184,260	\$212,875	\$16,848	\$413,983
Barnes tp.....	524	612	\$1,279,679	.....	364,740	213,327	1,857,746
Brantford tp.....	596	589	1,167,295	.....	423,925	122	1,591,342
Charleston tp.....	532	535	1,159,800	2,890	441,260	178,952	1,782,902
Clifton.....	309	291	.....	166,665	186,060	35,692	388,417
Vining.....	106	71	860	27,155	36,475	61,182	124,812
Clifton tp.....	539	498	1,428,566	.....	430,035	505,016	2,363,617
Coleman tp.....	541	496	1,000,906	4,400	297,775	2,605	1,305,686
Farmington tp.....	575	531	1,335,900	10,110	451,205	65,563	1,862,78
Franklin tp.....	723	672	1,257,277	37,365	541,805	258,348	2,094,795
Grant tp.....	536	521	895,504	.....	294,325	2,981	1,192,810
Greenleaf.....	938	681	.....	364,340	275,575	54,555	694,470
Greenleaf tp.....	490	485	1,269,937	.....	515,235	247,588	2,032,760
Haddam.....	430	382	.....	190,665	255,465	37,181	483,311
Haddam tp.....	563	601	1,302,576	.....	353,445	130,520	1,786,541
Hanover.....	1,035	1,002	.....	457,270	430,700	96,875	984,845
Hanover tp.....	551	594	1,291,840	.....	468,940	327,448	2,088,228
Highland tp.....	357	384	861,560	.....	250,105	1,143	1,112,808
Independence tp.....	648	664	1,369,499	12,675	591,765	198,461	2,172,400
Kimeo tp.....	578	602	1,011,261	.....	427,440	1,964	1,440,665
Lincoln tp.....	481	501	1,075,949	.....	390,580	1,603	1,468,132
Linn.....	256	243	.....	103,785	173,750	19,917	297,452
Linn tp.....	551	569	1,351,983	.....	397,950	231,005	1,980,938
Little Blue tp.....	537	546	1,193,119	.....	410,470	3,434	1,607,023
Logan tp.....	436	439	1,211,835	.....	345,285	100,107	1,657,227
Lowie tp.....	485	505	1,188,827	.....	324,215	959	1,514,001
Mill Creek tp.....	769	772	1,170,090	84,840	596,440	156,061	2,007,431
Sheridan tp.....	466	495	1,230,161	.....	338,105	262,534	1,830,800
Palmer.....	161	161	.....	80,235	179,450	34,498	294,183
Sherman tp.....	535	515	1,306,520	.....	529,560	49,137	1,885,217
Strawberry tp.....	564	567	1,104,605	.....	447,430	108	1,552,143
Mahaska.....	209	196	.....	87,480	121,225	27,242	235,947
Union tp.....	428	422	1,280,426	.....	360,030	93,108	1,733,564
Washington.....	1,470	1,405	.....	834,665	678,515	32,881	1,546,061
Washington tp.....	569	578	1,289,032	.....	364,435	124,192	1,777,659

LIVESTOCK.—WASHINGTON COUNTY.

Table showing number, value and mortality of livestock in the county for 1917 and 1918.

Livestock.	1917.		1918.		Mortality.	
	Number.	Value.	Number.	Value.	1917.	1918.
Horses.....	15,117	\$1,814,040.00	15,312	\$1,699,632.00	221	251
Mules and asses.....	3,180	429,300.00	2,835	396,900.00	28	14
Milk cows.....	10,856	814,200.00	14,050	1,152,100.00	140	297
Other cattle.....	35,812	1,790,600.00	34,281	1,851,174.00	659	1,550
Sheep.....	1,683	18,513.00	2,328	29,100.00	142	43
Swine.....	42,130	863,665.00	47,948	1,078,830.00	2,346	1,437
Totals.....	108,778	\$5,730,318.00	116,754	\$8,207,736.00	3,536	3,592

Number of dogs in county March 1, 1917, 2,506; March 1, 1918, 2,627.

Number of sheep killed by dogs, year ending March 1, 1917, 3; March 1, 1918, 15.

Number of sheep killed by wolves, year ending March 1, 1917, 4; March 1, 1918, 3.

Mortality of swine from cholera, year ending March 1, 1917, 1,649; March 1, 1918, 560.

FARM AND CROP STATISTICS.—WASHINGTON COUNTY.

Table showing acres, product and value of field crops in the county for 1917 and 1918.

Crops.	1917.			1918.		
	Acres.	Product.	Value.	Acres.	Product.	Value.
Winter wheat.....bu.	2,479	24,790	\$51,811.10	32,543	292,887	\$588,702.87
Spring wheat.....bu.	45	405	805.95	1,893	15,144	30,136.56
Corn.....bu.	164,794	2,801,498	3,165,692.74	143,436	430,308	645,462.00
Oats.....bu.	70,513	2,467,955	1,480,773.00	66,610	1,065,760	724,716.80
Rye.....bu.	1,162	17,430	30,328.20	2,861	34,332	54,931.20
Barley.....bu.	1,405	32,315	32,315.00	2,695	35,035	36,786.75
Emmer ("speltz").....bu.				17	238	173.74
Irish potatoes.....bu.	1,327	61,042	82,406.70	1,606	35,332	52,998.00
Sweet potatoes.....bu.	4	400	600.00	1	20	40.00
Cowpeas.....tons						
Flax.....bu.						
Broom corn.....lbs.	40	10,000	1,400.00	62	15,500	1,550.00
Millet.....tons	2,337	3,506	31,554.00	2,203	2,754	33,048.00
Sugar beets.....tons	1	10	55.00			
Sorghum for syrup.....gals.	22	1,320	924.00	70	3,500	3,850.00
for seed.....bu.	286	4,290	6,435.00	436	3,488	6,976.00
for hay.....tons	3,506	11,395	68,370.00	3,827	5,741	57,410.00
Milo for grain.....bu.	140	2,100	3,150.00	167	1,837	2,939.20
for stover*.....tons		280	1,680.00		334	2,338.00
for hay.....tons	10	20	140.00	88	132	1,122.00
Kafir for grain.....bu.	3,001	24,008	36,012.00	4,107	20,535	34,909.50
for stover*.....tons		7,501	45,006.00		7,187	57,496.00
for hay.....tons	352	880	5,280.00	84	210	1,995.00
Feterita for grain.....bu.	1,502	31,542	47,313.00	1,225	13,475	20,886.25
for stover*.....tons		4,506	24,783.00		2,756	16,536.00
for hay.....tons	101	227	1,589.00	505	1,389	11,112.00
Sudan grass.....tons	129	290	2,610.00	417	626	7,512.00
Jerusalem corn.....tons				12	30	285.00
Alfalfa.....tons	35,633	71,266	1,354,054.00	39,093	48,866	1,123,918.00
Timothy.....tons	207			100		
Clover.....tons				8		
Blue grass.....tons	176			62		
Sweet clover.....tons	149	† 500	7,500.00	304	‡ 500	11,000.00
Orchard grass.....tons						
Other tame grasses.....tons	107			201		
Prairie hay.....tons	21,832	21,832	283,816.00	20,922	10,461	188,298.00
Totals.....	311,260		\$6,766,403.69	325,555		\$3,717,128.87

Corn on hand March 1, 1917, 475,134 bushels; March 1, 1918, 1,010,390 bushels.

Wheat on hand March 1, 1917, 61,228 bushels; March 1, 1918, 17,227 bushels.

Prairie grass for pasture March 1, 1918; Acres fenced, 132,158; acres not fenced, 337.

* Forage after harvesting grain. † Product of 1916. ‡ Product of 1917.

SUMMARY.—WASHINGTON COUNTY.

Showing quantity and value of farm products in the county for 1917 and 1918.

Products.	1917.		1918.	
	Quantity.	Value.	Quantity.	Value.
Field crops.....acres	311,260	\$6,766,403.69	325,555	\$3,717,128.87
Animals slaughtered or sold for slaughter.....		1,765,894.00		2,772,231.00
Poultry and eggs sold.....		311,131.00		355,975.00
Wool clip.....lbs.	1,802	504.56	2,346	1,266.84
Cheese.....lbs.	4,790	814.30	655	117.90
Butter.....lbs.	326,346	98,743.80	389,552	154,565.28
Condensed milk.....lbs.				
Milk sold.....		234,270.00		339,395.00
Honey and beeswax.....lbs.	40,132	7,257.86	23,717	5,937.40
Wood marketed.....		2,104.00		3,720.00
Totals.....		\$9,187,123.21		\$7,350,337.29

Number of cream separators March 1, 1917, 1,642; March 1, 1918, 1,768.

Number of silos March 1, 1917, 116; March 1, 1918, 148.

Number of tractors March 1, 1917, 54; March 1, 1918, 61.

WICHITA COUNTY.

Organized in 1886; area, 458,521 acres; population, 1,826; rank in population, 101; assessed valuation, \$4,667,510; miles of railroad, main track, 23.92; county seat, Leoti; population, 360.

POPULATION AND VALUATION.—WICHITA COUNTY.

Table showing total population, by townships and cities, for 1917 and 1918, and the assessed valuation of the municipal townships and cities of 1918.

Townships (and cities).	Population.		Assessed valuation of property, 1918.				
	1917.	1918.	Land.	City lots.	Personal.	Railroad, etc.	Total.
The county	1,717	1,826	\$2,459,468	\$88,661	\$1,143,505	\$975,876	\$4,667,510
Edwards tp	564	600	\$931,451	.....	\$372,900	\$1,039	\$1,305,390
Leoti	378	360	.....	\$88,661	154,386	38,485	281,532
Leoti tp	429	476	624,925	.....	193,224	935,470	1,753,619
White Woman tp ..	346	390	903,092	.....	422,995	882	1,326,969

LIVESTOCK.—WICHITA COUNTY.

Table showing number, value and mortality of livestock in the county for 1917 and 1918.

Livestock.	1917.		1918.		Mortality.	
	Number.	Value.	Number.	Value.	1917.	1918.
Horses	3,655	\$438,600.00	3,907	\$433,677.00	65	61
Mules and asses	459	61,965.00	251	35,140.00	2	2
Milk cows	893	66,975.00	1,600	131,200.00	28	9
Other cattle	10,462	523,100.00	12,968	700,272.00	181	186
Sheep	1,410	15,510.00	1,600	20,000.00	.....	.....
Swine	1,087	22,283.50	760	17,100.00	20	33
Totals	17,966	\$1,128,433.50	21,086	\$1,337,389.00	296	291

Number of dogs in county March 1, 1917, 203; March 1, 1918, 207.

Number of sheep killed by dogs, year ending March 1, 1918, 1.

FARM AND CROP STATISTICS.—WICHITA COUNTY.

Table showing acres, product and value of field crops in the county for 1917 and 1918.

Crops.	1917.			1918.		
	Acres.	Product.	Value.	Acres.	Product.	Value.
Winter wheat.....bu.	948	1,896	\$3,943.68	2,716	13,580	\$26,752.60
Spring wheat.....bu.	50			87	435	848.25
Corn.....bu.	8,378			7,400	81,400	118,844.00
Oats.....bu.	577			1,053	3,159	2,369.25
Rye.....bu.	53			20	80	132.00
Barley.....bu.	10,644	42,576	43,427.52	8,115	73,035	69,383.25
Emmer ("speltz").....bu.	8					
Irish potatoes.....bu.	27	405	648.00	42	1,050	1,522.50
Sweet potatoes.....bu.	1	50	90.00			
Cowpeas.....tons						
Flax.....bu.						
Broom corn.....lbs.				200	60,000	6,000.00
Millet.....tons	900	450	4,500.00	769	769	7,690.00
Sugar beets.....tons						
Sorghum for syrup.....gals.				1	20	22.00
for seed.....bu.	357	1,785	2,891.70	1,724	18,964	35,083.40
for hay.....tons	7,949	5,962	59,620.00	6,324	9,486	94,860.00
Milo for grain.....bu.	2,578	7,734	12,915.78	2,930	20,510	30,765.00
for stover*.....tons		1,933	11,598.00		2,930	14,650.00
for hay.....tons	185	138	966.00	201	302	2,114.00
Kafir for grain.....bu.	1,879	1,879	2,818.50	1,976	13,832	20,748.00
for stover*.....tons		1,879	13,153.00		2,964	20,748.00
for hay.....tons	145	253	2,530.00	10	25	225.00
Feterita for grain.....bu.	1,582	4,746	7,119.00	950	7,600	11,780.00
for stover*.....tons		1,582	7,910.00		950	5,700.00
for hay.....tons	83	104	780.00	55	83	664.00
Sudan grass.....tons	264	528	5,280.00	249	436	4,360.00
Jerusalem corn.....tons						
Alfalfa.....tons	843	2,023	36,414.00	778	1,751	33,269.00
Timothy.....tons						
Clover.....tons						
Blue grass.....tons						
Sweet clover.....tons	10	†			†	
Orchard grass.....tons						
Other tame grasses.....tons						
Prairie hay.....tons	540	540	7,020.00	80	80	1,200.00
Totals.....	38,001		\$223,625.18	35,680		\$509,730.25

Corn on hand March 1, 1917, 3,395 bushels.

Wheat on hand March 1, 1917, 25 bushels; March 1, 1918, 285 bushels.

Prairie grass for pasture March 1, 1918: Acres fenced, 245,631; acres not fenced, 2,295.

* Forage after harvesting grain. † Product of 1916. ‡ Product of 1917.

SUMMARY.—WICHITA COUNTY.

Showing quantity and value of farm products in the county for 1917 and 1918.

Products.	1917.		1918.	
	Quantity.	Value.	Quantity.	Value.
Field crops.....acres	38,001	\$223,625.18	35,680	\$509,730.25
Animals slaughtered or sold for slaughter.....		74,355.00		35,643.00
Poultry and eggs sold.....		16,082.00		15,302.00
Wool clip.....lbs.	18,000	5,040.00	6,000	3,240.00
Cheese.....lbs.				
Butter.....lbs.	23,721	7,116.30	19,784	7,715.76
Condensed milk.....lbs.				
Milk sold.....		24,818.00		41,970.00
Honey and beeswax.....lbs.				
Wood marketed.....				
Totals.....		\$351,036.48		\$613,601.01

Number of cream separators March 1, 1917, 178; March 1, 1918, 232.

Number of silos March 1, 1917, 5; March 1, 1918, 5.

Number of tractors March 1, 1917, 4; March 1, 1918, 4.

WILSON COUNTY.

Organized in 1865; area, 366,716 acres; population, 20,600; rank in population, 26; assessed valuation, \$36,941,804; miles of railroad, main track, 119.37; county seat, Fredonia; population, 3,548.

POPULATION AND VALUATION.—WILSON COUNTY.

Table showing total population, by townships and cities, for 1917 and 1918, and the assessed valuation of the municipal townships and cities of 1918.

Townships (and cities).	Population.		Assessed valuation of property, 1918.				
	1917.	1918.	Land.	City lots.	Personal.	Railroad, etc.	Total.
The county.....	20,233	20,600	\$12,465,855	\$3,650,430	\$12,231,665	\$8,593,854	\$36,941,804
Altoona.....	1,437	1,230	.....	\$306,615	\$284,140	\$49,992	\$640,747
Cedar tp.....	631	758	725,965	.....	1,633,615	579,759	2,939,339
Fredonia.....	3,745	3,548	.....	1,477,380	1,216,695	83,120	2,777,195
Center tp.....	865	1,000	1,326,470	.....	586,635	993,362	2,906,467
Chetopa tp.....	613	612	572,045	.....	333,725	511,852	1,417,622
Buffalo.....	760	675	.....	206,930	173,395	22,004	402,329
Clifton tp.....	600	634	653,940	.....	255,075	378,661	1,287,676
Colfax tp.....	775	786	962,565	.....	458,155	691,644	2,112,364
Duck Creek tp.....	399	389	554,945	.....	165,665	254,539	975,149
New Albany.....	163	254	.....	52,740	80,765	28,487	161,992
Fall River tp.....	745	752	886,105	.....	422,580	439,577	1,748,262
Benedict.....	200	235	.....	62,640	63,360	27,216	153,216
Guilford tp.....	520	648	787,645	.....	383,945	662,435	1,834,025
Neodesha.....	3,749	3,748	.....	1,495,690	1,573,880	115,032	3,184,602
Neodesha tp.....	1,954	1,964	2,395,650	.....	3,143,695	1,700,931	7,240,276
Newark tp.....	690	626	582,640	.....	273,325	229,899	1,085,864
Pleasant Valley tp.....	597	700	973,270	.....	458,265	681,417	2,112,952
Prairie tp.....	400	362	489,855	.....	112,045	501,847	1,103,747
Talleyrand tp.....	573	604	574,990	.....	260,795	248,621	1,084,406
Coyville.....	179	274	.....	48,435	92,470	30,855	171,760
Verdigris tp.....	326	425	512,365	.....	124,385	242,322	879,072
Webster tp.....	332	376	467,405	.....	135,055	120,282	722,742

LIVESTOCK.—WILSON COUNTY.

Table showing number, value and mortality of livestock in the county for 1917 and 1918.

Livestock.	1917.		1918.		Mortality.	
	Number.	Value.	Number.	Value.	1917.	1918.
Horses.....	8,734	\$1,048,080.00	8,227	\$913,197.00	198	170
Mules and asses.....	2,545	343,575.00	1,898	265,720.00	17	28
Milk cows.....	6,214	466,050.00	7,433	609,506.00	124	162
Other cattle.....	15,496	774,800.00	16,342	882,468.00	281	338
Sheep.....	1,434	15,774.00	2,044	25,550.00	9	14
Swine.....	12,105	248,152.50	14,434	324,765.00	149	397
Totals.....	46,528	\$2,896,431.50	50,378	\$3,021,206.00	778	1,109

Number of dogs in county March 1, 1917, 1,228; March 1, 1918, 1,893.

Number of sheep killed by dogs, year ending March 1, 1917, 2; March 1, 1918, 5.

Number of sheep killed by wolves, year ending March 1, 1918, 18.

Mortality of swine from cholera, year ending March 1, 1917, 34; March 1, 1918, 145.

FARM AND CROP STATISTICS.—WILSON COUNTY.

Table showing acres, product and value of field crops in the county for 1917 and 1918.

Crops.	1917.			1918.		
	Acres.	Product.	Value.	Acres.	Product.	Value.
Winter wheat.....bu.	13,335	306,705	\$628,745.25	30,298	696,854	\$1,421,582.16
Spring wheat.....bu.						
Corn.....bu.	52,367	837,872	1,030,582.56	37,326	223,956	347,131.80
Oats.....bu.	17,483	594,422	362,597.42	23,872	716,160	515,635.20
Rye.....bu.	844	10,972	18,652.40	1,790	32,220	53,163.00
Barley.....bu.	3	63	63.63			
Emmer ("speltz").....bu.						
Irish potatoes.....bu.	470	22,030	33,045.00	831	39,888	58,635.36
Sweet potatoes.....bu.						
Cowpeas.....tons	192	240	3,840.00	231	347	5,725.50
Flax.....bu.	4,712	37,696	101,779.20	4,890	24,450	79,462.50
Broom corn.....lbs.	157	74,575	10,440.50	97	29,100	2,910.00
Millet.....tons	232	464	4,640.00	120	150	1,650.00
Sugar beets.....tons	1	10	55.00			
Sorghum for syrup.....gals.	69	4,830	3,381.00	277	12,465	13,711.50
for seed.....bu.	404	5,252	7,878.00	544	5,440	10,064.00
for hay.....tons	2,096	8,384	67,072.00	2,260	7,910	67,235.00
Milo for grain.....bu.	1,154	21,926	26,311.20	1,051	10,510	16,290.50
for stover*.....tons		2,308	6,924.00		1,577	6,308.00
for hay.....tons	134	402	2,412.00	34	68	408.00
Kafir for grain.....bu.	19,129	363,451	472,486.30	16,464	98,784	153,115.20
for stover*.....tons		62,169	341,929.50		41,160	205,800.00
for hay.....tons	94	329	2,303.00	129	323	2,261.00
Feterita for grain.....bu.	570	6,840	8,892.00	276	2,760	4,140.00
for stover*.....tons		1,710	6,840.00		690	3,105.00
for hay.....tons	206	618	3,708.00	135	405	2,632.50
Sudan grass.....tons	205	820	8,200.00	272	748	7,480.00
Jerusalem corn.....tons				7	18	126.00
Alfalfa.....tons	10,333	30,999	619,980.00	12,462	34,271	788,233.00
Timothy.....tons	596			464		
Clover.....tons	799			778		
Blue grass.....tons	568			703		
Sweet clover.....tons	208	† 2,300	34,500.00	377	‡ 3,000	63,000.00
Orchard grass.....tons	11			1		
Other tame grasses.....tons	75			364		
Prairie hay.....tons	24,067	18,050	288,800.00	26,810	20,108	382,052.00
Totals.....	150,514		\$4,096,057.96	162,863		\$4,211,857.22

Corn on hand March 1, 1917, 61,868 bushels; March 1, 1918, 158,001 bushels.

Wheat on hand March 1, 1917, 2,718 bushels; March 1, 1918, 20,387 bushels.

Prairie grass for pasture March 1, 1918: Acres fenced, 91,397.

* Forage after harvesting grain. † Product of 1916. ‡ Product of 1917.

SUMMARY.—WILSON COUNTY.

Showing quantity and value of farm products in the county for 1917 and 1918.

Products.	1917.		1918.	
	Quantity.	Value.	Quantity.	Value.
Field crops.....acres	150,514	\$4,096,057.96	162,863	\$4,211,857.22
Animals slaughtered or sold for slaughter.....		520,386.00		665,890.00
Poultry and eggs sold.....		138,909.00		150,703.00
Wool clip.....lbs.	3,786	1,060.08	3,950	2,133.00
Cheese.....lbs.			920	165.60
Butter.....lbs.	334,383	102,384.90	290,435	115,783.05
Condensed milk.....lbs.				
Milk sold.....		69,771.00		115,404.00
Honey and beeswax.....lbs.	26,422	4,762.36	13,383	3,361.75
Wood marketed.....		2,093.00		
Totals.....		\$4,935,424.30		\$5,265,297.62

Number of cream separators March 1, 1917, 671; March 1, 1918, 824.

Number of silos March 1, 1917, 70; March 1, 1918, 88.

Number of tractors March 1, 1917, 81; March 1, 1918, 41.

WOODSON COUNTY.

Organized in 1855; area, 321,717 acres; population, 9,196; rank in population, 71; assessed valuation, \$17,120,100; miles of railroad, main track, 89.08; county seat, Yates Center; population, 2,830.

POPULATION AND VALUATION.—WOODSON COUNTY.

Table showing total population, by townships and cities, for 1917 and 1918, and the assessed valuation of the municipal townships and cities of 1918.

Townships (and cities).	Population.		Assessed valuation of property, 1918.				
	1917.	1918.	Land.	City lots.	Personal.	Railroad, etc.	Total.
The county	9,001	9,196	\$8,656,109	\$1,459,245	\$3,180,000	\$3,824,746	\$17,120,100
Belmont tp.	493	473	\$574,075		\$161,610	\$137,306	\$872,991
Yates Center	2,251	2,330		\$1,101,515	492,080	120,585	1,714,180
Center tp.	660	673	1,129,667		262,040	821,641	2,213,348
Eminence tp.	496	479	731,358		272,940	473,392	1,477,690
Everett tp.	676	634	962,592		213,455	762,119	1,938,166
Liberty tp.	594	605	966,054		180,995	995	1,148,044
Neosho Falls	515	603		148,535	177,900	32,317	358,752
Neosho Falls tp.	622	616	752,250		318,885	523,767	1,594,902
North tp.	339	348	1,023,753		183,365	491	1,207,609
Owl Creek tp.	611	602	846,788		247,370	170,634	1,264,792
Perry tp.	389	409	575,034		188,845	155,735	919,614
Toronto	693	749		209,195	213,600	71,270	494,065
Toronto tp.	662	675	1,094,538		266,915	554,494	1,915,947

LIVESTOCK.—WOODSON COUNTY.

Table showing number, value and mortality of livestock in the county for 1917 and 1918.

Livestock.	1917.		1918.		Mortality.	
	Number.	Value.	Number.	Value.	1917.	1918.
Horses	5,534	\$664,080.00	5,528	\$613,608.00	242	87
Mules and asses	1,765	238,275.00	1,282	179,480.00	13	11
Milk cows	4,547	341,025.00	5,158	422,956.00	100	80
Other cattle	14,148	707,400.00	14,198	766,692.00	120	179
Sheep	1,156	12,716.00	6,950	86,875.00	17	27
Swine	5,627	115,353.50	7,170	161,325.00	83	79
Totals	32,777	\$2,078,849.50	40,286	\$2,230,936.00	575	463

Number of dogs in county March 1, 1917, 776; March 1, 1918, 871.

Number of sheep killed by dogs, year ending March 1, 1917, 3; March 1, 1918, 10.

Number of sheep killed by wolves, year ending March 1, 1917, 1; March 1, 1918, 1.

Mortality of swine from cholera, year ending March 1, 1917, 50; March 1, 1918, 3.

FARM AND CROP STATISTICS.—WOODSON COUNTY.

Table showing acres, product and value of field crops in the county for 1917 and 1918.

Crops.	1917.			1918.		
	Acres.	Product.	Value.	Acres.	Product.	Value.
Winter wheat.....bu.	3,723	85,629	\$179,820.90	14,660	293,200	\$595,196.00
Spring wheat.....bu.	49	1,078	2,177.56			
Corn.....bu.	35,749	786,478	880,855.36	26,919	215,352	325,181.52
Oats.....bu.	9,127	319,445	191,667.00	14,745	368,625	265,410.00
Rye.....bu.	726	3,630	6,025.80	1,417	21,255	33,157.80
Barley.....bu.				9	180	183.60
Emmer ("speltz").....bu.						
Irish potatoes.....bu.	346	16,954	26,278.70	462	30,492	45,738.00
Sweet potatoes.....bu.	6	252	403.20	5	150	240.00
Cowpeas.....tons	32	40	640.00	34	51	841.50
Flax.....bu.	1,448	10,136	27,367.20	1,336	6,680	21,710.00
Broom corn.....lbs.	102	45,900	6,655.50	55	16,500	1,650.00
Millet.....tons	194	339	3,390.00	113	170	2,040.00
Sugar beets.....tons						
Sorghum for syrup.....gals.	146	8,760	6,132.00	165	8,250	9,075.00
for seed.....bu.	376	7,520	12,182.40	235	2,350	4,418.00
for hay.....tons	891	3,119	18,714.00	1,545	3,476	24,332.00
Milo for grain.....bu.	966	19,320	27,241.20	1,897	13,279	20,582.45
for stover*.....tons		1,932	7,728.00		5,691	28,455.00
for hay.....tons	61	152	836.00	94	282	1,833.00
Kafir for grain.....bu.	15,075	241,200	340,092.00	11,429	68,574	109,718.40
for stover*.....tons		45,225	180,900.00		31,430	157,150.00
for hay.....tons	20	70	350.00	29	80	520.00
Feterita for grain.....bu.	1,517	24,272	30,340.00	1,992	19,920	30,477.60
for stover*.....tons		3,034	15,170.00		5,976	23,904.00
for hay.....tons	567	1,417	7,085.00	495	1,485	8,910.00
Sudan grass.....tons	34	102	918.00	82	164	1,640.00
Jerusalem corn.....tons	7	25	125.00	14	39	253.50
Alfalfa.....tons	2,180	6,540	130,800.00	3,001	7,503	187,575.00
Timothy.....tons	836			648		
Clover.....tons	974			927		
Blue grass.....tons	407	† 2,019	30,285.00	159	‡ 1,317	26,340.00
Sweet clover.....tons	102			162		
Orchard grass.....tons						
Other tame grasses.....tons	83			17		
Prairie hay.....tons	53,405	53,405	854,480.00	49,434	24,717	469,623.00
Totals.....	129,149		\$2,988,659.82	132,080		\$2,396,155.37

Corn on hand March 1, 1917, 14,100 bushels; March 1, 1918, 66,941 bushels.

Wheat on hand March 1, 1917, 542 bushels; March 1, 1918, 3,725 bushels.

Prairie grass for pasture March 1, 1918: Acres fenced, 74,136; acres not fenced, 40.

* Forage after harvesting grain. † Product of 1916. ‡ Product of 1917.

SUMMARY.—WOODSON COUNTY.

Showing quantity and value of farm products in the county for 1917 and 1918.

Products.	1917.		1918.	
	Quantity.	Value.	Quantity.	Value.
Field crops.....acres	129,149	\$2,988,659.82	132,080	\$2,396,155.37
Animals slaughtered or sold for slaughter.....		380,786.00		454,172.00
Poultry and eggs sold.....		98,941.00		97,265.00
Wool clip.....lbs.	3,499	979.72	4,002	2,161.08
Cheese.....lbs.				
Butter.....lbs.	149,464	44,843.70	132,965	51,856.35
Condensed milk.....lbs.				
Milk sold.....		41,870.00		63,882.00
Honey and beeswax.....lbs.	8,064	1,451.52	4,110	1,027.50
Wood marketed.....		563.00		1,730.00
Totals.....		\$3,558,094.76		\$3,068,249.30

Number of cream separators March 1, 1917, 532; March 1, 1918, 623.

Number of silos March 1, 1917, 101; March 1, 1918, 92.

Number of tractors March 1, 1917, 16; March 1, 1918, 15.

WYANDOTTE COUNTY.

Organized in 1859; area, 99,977 acres; population, 110,252; rank in population, 1; assessed valuation, \$124,523,609; miles of railroad, main track, 80.66; county seat, Kansas City; population, 93,121.

POPULATION AND VALUATION.—WYANDOTTE COUNTY.

Table showing total population, by townships and cities, for 1917 and 1918, and the assessed valuation of the municipal townships and cities of 1918.

Townships (and cities).	Population.		Assessed valuation of property, 1918.				
	1917.	1918.	Land.	City lots.	Personal.	Railroad, etc.	Total.
The county	112,864	110,252	\$10,837,345	\$70,238,785	\$23,050,550	\$20,396,929	\$124,523,609
Bonner Springs...	1,368	1,178	.....	\$517,040	\$288,970	\$84,428	\$890,438
Edwardsville.....	306	306	2,628	39,260	36,040	68,636	143,936
Delaware tp.....	1,425	1,144	.....	176,105	230,190	903,741	3,200,343
Prairie tp.....	941	854	1,367,677	39,075	246,660	456,519	2,109,931
Quindaro tp.....	2,207	1,883	2,367,854	548,160	167,860	964,041	4,047,915
Shawnee tp.....	3,114	2,753	3,239,130	500,130	424,480	2,541,562	6,705,302
Wyandotte tp.....	600	1,429	1,972,377	171,040	161,460	1,051,076	3,355,953
Rosedale.....	7,675	7,584	.....	3,750,345	800,420	927,246	5,478,011
Kansas City:							
First ward.....	2,968	2,083					
Second ward.....	9,812	9,562					
Third ward.....	25,579	27,345					
Fourth ward.....	12,419	12,074	93,121	64,497,630	20,694,470	13,399,680	98,591,780
Fifth ward.....	22,958	22,569					
Sixth ward.....	12,789	11,438					
Seventh ward....	8,703	8,050					

LIVESTOCK.—WYANDOTTE COUNTY.

Table showing number, value and mortality of livestock in the county for 1917 and 1918.

Livestock.	1917.		1918.		Mortality.	
	Number.	Value.	Number.	Value.	1917.	1918.
Horses.....	4,980	\$597,600.00	3,434	\$381,174.00	133	59
Mules and asses.....	1,004	135,540.00	857	119,980.00	7	11
Milk cows.....	3,109	233,175.00	2,443	200,326.00	38	31
Other cattle.....	2,232	111,600.00	1,680	90,720.00	17	56
Sheep.....	363	3,993.00	977	12,212.50	.....	2
Swine.....	5,454	111,807.00	3,996	89,910.00	226	191
Totals.....	17,142	\$1,193,715.00	13,387	\$894,322.50	421	350

Number of dogs in county March 1, 1917, 2,331; March 1, 1918, 2,371.

Number of sheep killed by dogs, year ending March 1, 1917, 5.

Mortality of swine from cholera, year ending March 1, 1917, 60; March 1, 1918, 140.

FARM AND CROP STATISTICS.—WYANDOTTE COUNTY.

Table showing acres, product and value of field crops in the county for 1917 and 1918.

Crops	1917.			1918.		
	Acres.	Product.	Value.	Acres.	Product.	Value.
Winter wheat.....bu.	7,711	161,931	\$340,055.10	11,306	248,732	\$514,875.24
Spring wheat.....bu.				56	1,232	2,513.28
Corn.....bu.	8,848	256,592	320,740.00	6,397	140,734	208,286.32
Oats.....bu.	3,123	121,797	73,078.20	2,677	80,310	56,217.00
Rye.....bu.	82	1,640	2,820.80	55	1,155	1,963.50
Barley.....bu.	14	420	441.00	50	1,400	1,400.00
Emmer ("speltz").....bu.						
Irish potatoes.....bu.	1,660	152,720	221,444.00	1,919	153,520	207,252.00
Sweet potatoes.....bu.	463	62,505	83,131.65	415	55,610	83,415.00
Cowpeas.....tons				6	9	148.50
Flax.....bu.						
Broom corn.....lbs.	1	300	42.00	8	2,400	240.00
Millet.....tons	31	55	550.00			
Sugar beets.....tons	11	110	605.00	59	354	3,363.00
Sorghum for syrup.....gals.	5	350	245.00	1	70	77.00
for seed.....tons	3	36	54.00			
for hay.....tons	43	129	903.00	26	91	591.50
Milo for grain.....bu.	4	48	67.20			
for stover*.....tons		14	56.00			
for hay.....tons						
Kafir for grain.....bu.	89	1,602	2,569.20	53	1,325	2,120.00
for stover*.....tons		267	1,068.00		159	1,113.00
for hay.....tons	18	63	441.00	12	36	324.00
Feterita for grain.....bu.	6	108	140.40			
for stover*.....tons		24	96.00			
for hay.....tons						
Sudan grass.....tons	4	12	96.00	35	105	1,050.00
Jerusalem corn.....tons	1	4	28.00			
Alfalfa.....tons	1,997	6,590	144,980.00	1,953	4,883	122,075.00
Timothy.....tons	1,174			888		
Clover.....tons	1,693			989		
Blue grass.....tons	3,984			727		
Sweet clover.....tons	29	† 6,110	109,980.00	† 972		22,356.00
Orchard grass.....tons	43			14		
Other tame grasses.....tons				26		
Prairie hay.....tons	1,111	1,666	28,322.00	327	327	6,867.00
Totals.....	32,148		\$1,331,947.55	27,999		\$1,236,247.34

Corn on hand March 1, 1917, 9,665 bushels; March 1, 1918, 69,928 bushels.

Wheat on hand March 1, 1917, 200 bushels; March 1, 1918, 228,828 bushels.

Prairie grass for pasture March 1, 1918: Acres fenced, 8,360; acres not fenced, 409.

* Forage after harvesting grain. † Product of 1916. ‡ Product of 1917.

SUMMARY.—WYANDOTTE COUNTY.

Showing quantity and value of farm products in the county for 1917 and 1918.

Products.	1917.		1918.	
	Quantity.	Value.	Quantity.	Value.
Field crops.....acres	32,148	\$1,331,947.55	27,999	\$1,236,247.34
Animals slaughtered or sold for slaughter.....		94,213.00		108,510.00
Poultry and eggs sold.....		33,087.00		21,087.00
Wool clip.....lbs.			336	181.44
Cheese.....lbs.	7,900	1,343.00	235	42.30
Butter.....lbs.	240,490	76,411.80	178,696	73,256.64
Condensed milk.....lbs.				
Milk sold.....		143,284.00		217,119.00
Honey and beeswax.....lbs.	2,151	390.18	50	12.50
Wood marketed.....		350.00		218.00
Totals.....		\$1,681,026.53		\$1,656,674.22

Number of cream separators March 1, 1917, 84; March 1, 1918, 62.

Number of silos March 1, 1917, 14; March 1, 1918, 15.

Number of tractors March 1, 1917, 6; March 1, 1918, 6.

Tables and Diagrams Showing Comparative Yields of Field Crops, Assessed Valuation, Population and State Summaries.

FIELD-CROP STATISTICS.

TABLE showing the total number of acres in field crops and the aggregate value of their production, for the state, and each county, 1917 and 1918.

COUNTIES.	1917.		1918.	
	Acres.	Value.	Acres.	Value.
The State	22,252,920	\$392,822,441.60	22,249,594	\$442,091,192.29
Allen.....	171,073	\$4,330,335.95	176,449	\$3,790,234.41
Anderson.....	170,509	3,784,607.32	178,215	3,727,784.11
Atchison.....	191,958	4,544,047.30	177,174	4,723,239.83
Barber.....	226,890	4,054,930.81	227,385	5,225,193.85
Barton.....	364,813	4,276,183.45	391,123	9,000,529.78
Bourbon.....	166,211	4,291,925.76	186,758	3,449,680.76
Brown.....	271,278	7,553,931.05	264,751	6,881,917.44
Butler.....	303,758	7,098,467.68	314,447	8,033,706.41
Chase.....	89,906	2,931,653.14	85,736	2,719,229.47
Chautauqua.....	97,565	2,084,303.69	100,473	2,275,205.21
Cherokee.....	185,136	3,890,749.50	191,353	4,262,383.96
Cheyenne.....	203,088	3,048,584.74	225,473	3,679,375.27
Clark.....	157,439	1,441,271.20	166,245	2,203,529.65
Clay.....	246,077	4,345,035.88	249,280	3,604,081.09
Cloud.....	287,586	4,204,548.36	281,622	2,252,572.94
Coffey.....	196,536	4,294,681.84	209,571	4,922,382.42
Comanche.....	191,366	2,242,265.72	183,482	3,683,514.37
Cowley.....	276,089	7,356,984.25	283,010	8,809,684.65
Crawford.....	157,169	3,811,353.24	184,641	3,546,863.49
Decatur.....	264,050	1,934,724.36	270,369	2,163,203.86
Dickinson.....	320,434	8,562,673.20	318,792	8,207,985.25
Doniphan.....	159,859	5,668,368.16	168,590	4,454,608.36
Douglas.....	155,946	4,822,742.91	162,446	5,402,593.20
Edwards.....	238,868	3,126,540.11	241,348	2,670,963.22
Elk.....	141,888	3,048,803.72	132,768	2,835,903.86
Ellis.....	245,270	1,146,538.76	275,244	3,856,290.81
Ellsworth.....	215,698	1,959,185.38	223,179	4,139,321.10
Finney.....	133,205	3,289,546.33	126,609	3,644,166.90
Ford.....	371,032	2,079,414.80	364,822	1,815,674.76
Franklin.....	203,454	4,335,974.48	195,209	4,507,505.98
Geary.....	88,748	2,463,004.24	88,561	2,097,499.61
Gove.....	182,891	727,681.93	168,105	1,582,372.87
Graham.....	279,666	607,627.70	278,472	1,650,408.43
Grant.....	25,744	510,212.36	33,032	738,157.25
Gray.....	167,799	1,163,556.74	111,718	1,219,354.84
Greeley.....	14,214	142,556.61	13,913	257,141.09
Greenwood.....	181,009	3,850,739.69	172,743	3,994,245.40
Hamilton.....	27,338	740,420.48	23,000	610,257.18
Harper.....	299,694	6,097,944.90	302,542	7,543,659.66
Harvey.....	230,671	5,584,545.42	228,310	5,532,044.59
Haskell.....	57,533	481,699.95	65,326	799,128.56
Hodgeman.....	176,206	818,233.44	155,492	1,103,572.25
Jackson.....	248,620	5,617,740.68	255,498	5,184,803.40
Jefferson.....	225,316	5,417,592.07	225,956	6,270,524.22
Jewell.....	355,369	4,963,824.49	345,213	8,278,105.06

FIELD-CROP STATISTICS—CONCLUDED.

COUNTIES.	1917.		1918.	
	Acres.	Value.	Acres.	Value.
Johnson.....	192,675	\$4,991,102.96	207,457	\$5,345,172.22
Kearny.....	44,157	1,170,198.85	45,370	1,414,333.27
Kingman.....	308,878	4,608,814.64	306,423	7,014,485.79
Kiowa.....	237,612	2,125,557.70	239,355	3,755,452.65
Labette.....	223,488	5,072,332.13	234,585	5,756,735.63
Lane.....	131,480	664,362.63	131,879	1,405,704.62
Leavenworth.....	184,679	4,476,948.24	191,077	5,410,226.45
Lincoln.....	228,851	1,388,645.28	130,546	1,424,696.12
Linn.....	204,574	4,441,608.76	193,561	3,434,240.46
Logan.....	100,030	674,391.74	80,598	1,151,410.85
Lyon.....	215,330	6,420,425.80	228,439	6,780,853.58
Marion.....	334,965	8,353,963.35	339,344	9,173,437.81
Marsnall.....	360,166	10,372,169.32	360,277	5,066,859.52
McPherson.....	361,274	8,400,374.01	370,583	10,529,531.39
Meade.....	209,536	1,780,801.00	211,400	2,434,617.73
Miami.....	216,017	4,970,404.58	203,431	5,136,637.89
Mitchell.....	288,492	3,422,019.98	288,507	3,448,348.29
Montgomery.....	163,640	4,059,411.85	187,664	5,383,592.85
Morris.....	171,128	4,785,269.33	177,493	4,147,607.05
Morton.....	40,812	718,436.08	41,060	1,404,134.75
Nemaha.....	288,739	8,219,584.56	302,614	6,409,631.46
Neosho.....	177,208	4,289,367.36	190,637	4,598,434.71
Ness.....	194,322	1,406,699.78	176,801	2,100,416.01
Norton.....	285,577	1,381,723.42	287,834	2,999,284.81
Osage.....	209,788	6,069,250.60	222,862	5,554,855.61
Osborne.....	284,231	1,813,860.28	291,188	4,205,550.70
Ottawa.....	229,490	2,693,815.63	229,235	3,311,267.19
Pawnee.....	309,867	3,948,001.65	323,734	4,848,158.35
Phillips.....	311,316	1,699,753.22	310,432	4,065,271.89
Pottawatomie.....	208,480	6,096,661.30	201,824	4,013,743.48
Pratt.....	320,405	6,882,350.32	317,676	7,644,045.44
Rawlins.....	240,114	2,045,123.63	255,079	2,716,641.11
Reno.....	482,303	9,930,399.57	509,290	12,838,723.69
Republic.....	293,544	4,679,013.19	294,771	3,476,239.77
Rice.....	297,701	6,638,149.30	299,373	7,966,382.08
Riley.....	155,372	4,425,876.20	149,045	3,168,600.56
Rooks.....	307,680	711,842.72	290,045	3,060,072.08
Rush.....	223,156	2,101,176.11	183,993	1,959,635.40
Russell.....	263,754	2,228,744.47	272,042	3,884,313.86
Saline.....	248,914	5,815,444.64	244,021	6,368,739.72
Scott.....	78,468	476,261.64	77,576	920,647.85
Sedgwick.....	417,080	8,660,542.20	432,281	12,610,575.56
Seward.....	138,661	2,139,082.72	126,661	3,004,235.65
Shawnee.....	176,924	5,490,038.76	172,419	5,728,229.36
Sheridan.....	231,633	698,842.28	147,986	866,764.25
Sherman.....	106,652	1,117,324.35	122,998	1,753,213.85
Smita.....	351,706	2,979,589.88	339,156	5,926,188.34
Stafford.....	332,213	7,736,780.88	333,111	8,949,743.75
Stanton.....	22,402	579,709.75	24,085	583,210.00
Stevens.....	99,065	2,417,589.15	100,645	3,055,210.21
Sumner.....	483,115	12,317,682.36	500,340	14,202,505.29
Thomas.....	244,774	1,811,954.38	263,527	2,368,621.70
Trego.....	195,181	972,140.46	173,844	2,005,989.95
Wabaunsee.....	164,264	4,723,672.62	168,341	5,098,184.13
Wallace.....	34,996	572,706.00	36,457	788,065.09
Washington.....	311,260	6,766,403.69	325,555	3,717,128.87
Wichita.....	38,001	223,625.18	35,680	509,730.25
Wilson.....	150,514	4,096,057.96	162,863	4,211,857.22
Woodson.....	129,149	2,988,659.82	132,080	2,396,155.37
Wyandotte.....	32,148	1,331,947.55	27,999	1,236,247.34

ASSESSED VALUATION.

TABLE showing the actual value of the taxable property in the state of Kansas, as determined by the State Tax Commission, for the year 1918.

COUNTIES.	Aggregate value of all land taxable.	Aggregate value of all town lots taxable.	Valuation of personal property.	Valuation of public service corporations.	Total valuation of all property.
The State.....	\$1,592,644,549	\$491,767,327	\$875,303,332	\$459,083,014	\$3,418,798,222
Allen.....	\$12,187,495	\$5,453,350	\$9,287,275	\$7,946,676	\$34,874,796
Anderson.....	11,612,620	1,954,655	5,680,215	8,101,700	27,349,190
Atchison.....	19,190,368	8,167,395	12,985,378	4,722,610	45,065,751
Barber.....	11,603,170	1,622,665	7,653,680	3,925,653	24,805,168
Barton.....	25,425,590	5,398,930	9,524,650	4,280,117	44,629,287
Bourbon.....	13,728,371	5,396,773	8,645,864	5,295,581	33,066,589
Brown.....	28,621,457	4,763,295	13,242,565	4,161,927	50,789,244
Butler.....	33,486,854	6,974,083	63,157,530	14,775,879	118,394,336
Chase.....	16,666,280	1,118,220	4,976,320	3,543,917	26,304,737
Chautauqua.....	7,154,675	1,493,905	7,482,715	4,032,631	20,163,926
Cherokee.....	13,904,644	5,387,595	8,358,202	6,482,701	34,133,142
Cheyenne.....	6,064,134	363,508	3,557,465	567,930	10,553,037
Clark.....	7,242,100	859,338	4,868,870	1,572,877	14,543,185
Clay.....	19,336,207	3,303,970	8,739,950	3,484,922	34,865,049
Cloud.....	21,014,895	4,906,395	8,979,420	4,723,220	39,623,930
Coffey.....	14,534,009	1,932,404	5,770,526	4,033,135	26,270,074
Comanche.....	7,831,050	945,845	4,085,095	1,090,418	13,952,408
Cowley.....	26,094,763	11,172,594	14,322,185	11,515,789	63,105,331
Crawford.....	14,856,485	13,080,935	11,425,270	9,446,440	48,809,130
Decatur.....	7,805,160	859,740	3,666,210	2,043,590	14,374,700
Dickinson.....	26,398,062	6,150,195	13,747,910	7,266,054	53,562,221
Doniphan.....	17,191,261	1,641,805	8,678,305	3,243,374	30,754,745
Douglas.....	17,452,906	10,017,100	9,733,140	4,574,519	41,777,665
Edwards.....	10,382,650	1,248,270	5,114,111	2,099,776	18,844,807
Elk.....	8,672,279	1,245,905	4,169,774	4,380,458	18,468,416
Ellis.....	12,260,848	2,367,228	5,490,539	1,927,667	22,046,282
Ellsworth.....	16,345,230	2,289,320	7,465,990	3,478,222	29,579,062
Finney.....	9,835,435	1,976,920	4,463,229	2,035,671	18,311,255
Ford.....	15,287,899	3,062,679	6,414,375	4,526,639	29,291,592
Franklin.....	18,233,823	6,040,690	9,384,681	7,422,303	41,081,497
Geary.....	9,479,634	3,993,312	6,123,723	2,398,675	21,995,344
Gove.....	5,643,630	481,380	2,362,470	1,790,385	10,277,865
Graham.....	9,481,790	655,125	3,430,095	911,640	14,528,650
Grant.....	2,910,987	37,665	817,020	34,180	3,799,852
Gray.....	6,881,542	487,300	2,273,398	1,905,935	11,548,175
Greeley.....	2,314,081	81,820	803,274	1,086,362	4,285,537
Greenwood.....	20,139,976	2,261,800	8,761,310	6,581,048	37,744,134
Hamilton.....	2,960,535	353,869	1,637,817	1,759,552	6,711,773
Harper.....	17,848,805	2,916,174	7,722,710	4,948,244	33,435,933
Harvey.....	18,317,002	6,187,812	10,433,326	6,016,623	40,954,763
Haskell.....	3,344,565	101,020	978,197	514,329	4,958,111
Hodgeman.....	8,777,870	245,710	2,022,350	657,245	11,703,175
Jackson.....	20,771,715	2,909,915	9,072,865	3,026,450	35,780,945
Jefferson.....	20,985,011	2,024,540	8,391,865	3,990,608	35,392,024
Jewell.....	27,634,980	2,498,405	10,166,160	3,142,785	43,462,330
Johnson.....	24,243,689	4,773,989	6,458,965	8,581,404	44,058,047
Kearny.....	4,012,610	253,360	1,735,325	1,458,109	7,459,404
Kingman.....	18,847,281	1,899,741	8,148,430	5,014,975	33,910,427
Kiowa.....	10,229,453	1,013,363	4,284,405	1,975,887	17,502,748
Labette.....	14,126,350	10,463,345	8,930,800	8,691,569	42,212,064
Lane.....	4,130,430	252,453	2,081,540	1,789,722	8,262,145
Leavenworth.....	18,849,506	9,517,920	9,157,600	8,082,698	45,607,724
Lincoln.....	16,222,311	1,684,975	7,078,480	1,667,360	26,653,126
Linn.....	13,210,413	1,519,385	5,450,453	3,431,110	23,611,361
Logan.....	4,283,625	413,346	2,151,053	1,948,342	8,796,366

ASSESSED VALUATION—CONCLUDED.

COUNTIES.	Aggregate value of all land taxable.	Aggregate value of all town lots taxable.	Valuation of personal property.	Valuation of public service corporations.	Total valuation of all property.
Lyon.....	\$20,905,086	\$9,109,345	\$11,387,940	\$6,546,825	\$47,949,196
Marion.....	27,501,758	3,191,698	11,643,839	7,112,715	49,450,010
Marshall.....	33,984,610	4,435,020	17,329,420	4,954,262	60,703,312
McPherson.....	29,825,270	5,668,520	15,661,705	4,923,266	56,078,761
Meade.....	7,537,589	643,864	3,087,256	1,546,433	12,815,142
Miami.....	19,713,581	3,254,690	9,333,564	7,737,541	40,039,376
Mitchell.....	21,033,339	3,455,180	8,401,817	1,938,369	34,828,705
Montgomery.....	16,993,139	16,735,010	28,629,495	12,725,381	75,083,025
Morris.....	14,843,640	1,764,095	6,567,405	4,416,323	27,593,463
Morton.....	2,893,334	422,752	1,385,751	446,066	5,147,903
Nemaha.....	30,041,499	2,986,090	13,728,054	2,997,463	49,753,106
Neosho.....	14,504,310	5,882,065	9,459,010	7,647,364	37,492,749
Ness.....	10,631,760	455,191	4,096,470	2,765,916	17,949,337
Norton.....	9,670,040	1,606,130	5,056,330	3,201,388	19,536,888
Osage.....	18,932,146	2,563,853	7,299,135	7,147,633	35,942,767
Osborne.....	17,573,342	2,494,400	8,273,610	1,553,510	29,894,862
Ottawa.....	17,809,765	2,430,925	6,747,735	3,005,509	29,993,934
Pawnee.....	17,680,821	2,807,415	5,763,480	2,561,167	28,812,887
Phillips.....	14,401,485	1,731,950	6,163,126	2,994,368	25,290,925
Pottawatomie.....	20,312,501	2,172,125	10,485,645	3,863,335	36,833,606
Pratt.....	17,319,336	2,990,426	7,524,633	3,811,211	31,645,606
Rawlins.....	6,439,660	427,300	2,870,030	971,940	10,708,930
Reno.....	39,803,383	17,616,201	23,862,940	9,179,098	90,461,622
Republic.....	26,588,705	2,514,790	10,027,640	5,725,517	44,856,652
Rice.....	22,405,574	3,144,637	9,396,022	5,791,138	40,737,371
Riley.....	16,121,280	6,192,085	8,960,140	4,981,827	36,255,332
Rooks.....	12,557,216	1,656,680	5,347,075	1,464,837	21,025,808
Rush.....	12,496,855	1,009,105	3,784,485	2,338,692	19,629,137
Russell.....	15,951,948	1,022,799	7,543,189	2,504,881	28,022,817
Saline.....	21,990,070	12,652,320	18,508,125	6,808,233	59,958,748
Scott.....	3,270,600	423,585	1,785,105	1,689,950	7,169,240
Sedgwick.....	36,740,321	54,187,490	30,721,551	15,369,157	137,018,519
Seward.....	4,713,825	1,492,817	2,431,875	1,539,352	10,177,869
Shawnee.....	21,580,963	40,324,375	25,006,295	12,947,849	99,859,482
Sheridan.....	7,852,875	270,545	2,932,890	1,570,048	12,626,358
Sherman.....	4,940,171	923,385	2,299,825	1,997,672	10,161,053
Smith.....	21,328,635	1,917,515	8,226,800	2,260,922	33,733,872
Stafford.....	18,839,390	1,984,075	8,437,325	2,394,212	31,654,912
Stanton.....	2,413,300	11,985	1,126,985	133	3,552,493
Stevens.....	4,602,106	265,730	1,722,187	572,710	7,162,733
Sumner.....	32,553,226	6,913,586	14,389,350	9,453,490	63,309,652
Thomas.....	6,806,230	523,940	2,881,570	3,087,228	13,298,968
Trego.....	7,568,077	540,065	2,738,680	1,595,819	12,442,641
Wabaunsee.....	17,403,367	1,363,370	6,541,460	3,799,196	29,107,393
Wallace.....	3,044,986	278,851	1,581,358	1,667,573	6,572,768
Washington.....	30,034,147	2,648,800	12,906,590	3,573,157	49,162,694
Wichita.....	2,459,468	88,661	1,143,505	975,876	4,667,510
Wilson.....	12,465,855	3,650,430	12,231,665	8,593,854	36,941,804
Woodson.....	8,656,109	1,459,245	3,180,000	3,824,746	17,120,100
Wyandotte.....	10,837,745	70,238,785	23,050,550	20,396,929	124,523,609

WHEAT, 1860 to 1918.

TABLE showing acres, annual product, value and average yield of wheat (winter and spring).

YEARS.	Acres.	Bushels.	Values.	Average yield per acre.
				<i>bus.</i>
1860.....		168,527		
1861.....		185,379		
1862.....	9,630	202,232	\$149,652.00	21.00
1863.....	16,434	262,953	231,399.00	16.00
1864.....	13,439	201,598	405,212.00	15.00
1865.....	12,768	191,519	338,989.00	15.00
1866.....	12,171	260,465	497,488.00	21.40
1867.....	89,285	1,250,000	2,300,000.00	14.00
1868.....	98,525	1,537,000	2,074,950.00	15.60
1869.....	151,351	2,800,000	2,212,000.00	18.50
1870.....	156,200	2,343,000	2,014,980.00	15.00
1871.....	169,433	2,694,000	3,044,220.00	15.90
1872.....	185,775	2,155,000	3,060,100.00	11.60
1873.....	309,286	4,330,000	4,330,000.00	14.00
1874.....	716,205	9,881,383	7,631,671.00	13.79
1875.....	743,206	13,209,403	11,350,375.38	17.77
1876.....	1,023,183	14,620,225	12,413,780.89	14.28
1877.....	1,063,993	14,316,705	12,240,128.72	13.45
1878.....	1,730,812	32,315,358	18,441,066.84	18.67
1879.....	1,932,798	20,550,936	18,448,711.14	10.63
1880.....	2,444,434	25,279,884	20,980,668.57	10.34
1881.....	2,182,872	20,479,689	21,705,275.80	9.38
1882.....	1,603,267	35,734,846	24,003,821.00	22.29
1883.....	1,559,302	30,024,936	22,322,119.58	19.25
1884.....	2,237,128	48,050,431	20,516,560.93	21.47
1885.....	2,090,549	10,772,181	6,829,945.00	5.15
1886.....	1,758,393	14,571,033	8,482,503.00	8.29
1887.....	1,373,915	9,278,501	5,759,449.60	6.75
1888.....	1,120,119	16,724,717	12,097,814.11	14.93
1889.....	1,594,285	35,319,851	19,917,701.21	22.15
1890.....	2,321,113	28,801,214	23,410,548.00	12.40
1891.....	3,733,910	58,550,653	42,596,759.09	15.68
1892.....	4,129,829	74,538,906	40,691,762.03	18.05
1893.....	5,110,873	24,827,523	11,032,932.04	4.85
1894.....	4,840,892	28,205,700	11,297,797.13	5.82
1895.....	4,171,971	16,001,060	7,463,118.47	3.84
1896.....	3,357,727	27,754,888	13,257,193.77	8.27
1897.....	3,444,364	51,026,604	34,385,304.69	14.81
1898.....	4,624,731	60,790,661	32,937,042.28	13.14
1899.....	4,988,952	43,687,013	22,406,410.00	8.76
1900.....	4,378,533	77,339,091	41,974,145.00	17.66
1901.....	5,316,482	90,333,095	50,610,505.00	16.99
1902.....	6,301,040	54,649,236	29,139,490.00	8.67
1903.....	5,964,866	94,041,902	52,426,355.55	15.76
1904.....	5,861,712	65,141,629	51,409,255.86	11.11
1905.....	5,925,338	77,178,177	53,889,365.76	13.02
1906.....	6,436,085	93,292,980	55,178,711.62	14.49
1907.....	7,235,283	74,155,695	56,787,511.85	10.24
1908.....	6,939,351	76,808,922	63,885,145.74	11.06
1909.....	6,450,734	80,958,740	75,941,189.83	12.55
1910.....	4,870,442	61,017,339	52,785,965.32	12.53
1911.....	4,643,398	50,809,435	43,840,589.85	10.94
1912.....	6,242,855	88,889,128	71,227,437.25	14.24
1913.....	6,062,066	72,458,051	56,375,409.95	11.95
1914.....	9,116,183	180,924,885	151,583,031.17	19.85
1915.....	7,630,810	95,768,176	85,681,786.81	12.55
1916.....	7,819,627	99,384,760	134,615,306.56	12.71
1917.....	3,546,433	41,563,387	85,679,211.22	11.72
1918.....	6,800,059	93,195,332	186,332,974.88	13.70

CORN, 1860 to 1918.

TABLE showing acres, annual product, value, and average yield per acre.

YEARS.	Acres.	Bushels.	Values.	Average yield per acre.
				<i>bus.</i>
1860.....		5,678,834		
1861.....		6,246,717		
1862.....	170,365	6,814,601	\$2,180,672.00	40.00
1863.....	193,597	8,518,251	2,555,475.00	44.00
1864.....	186,923	4,673,081	6,402,121.00	25.00
1865.....	163,463	6,729,236	3,566,495.00	41.00
1866.....	190,858	6,527,358	4,112,235.00	34.20
1867.....	211,373	8,159,000	4,487,450.00	38.60
1868.....	360,388	6,487,000	6,422,130.00	18.00
1869.....	506,193	24,500,000	10,780,000.00	48.40
1870.....	595,892	16,685,000	9,677,300.00	28.00
1871.....	617,325	24,693,000	7,160,970.00	40.00
1872.....	769,636	29,631,000	6,518,820.00	38.50
1873.....	1,202,046	47,000,000	14,570,000.00	39.10
1874.....	1,525,421	15,699,078	12,064,424.00	10.29
1875.....	1,932,861	80,798,769	19,071,698.15	48.80
1876.....	1,844,454	82,308,176	19,217,332.24	43.68
1877.....	2,563,112	103,497,831	20,206,184.92	40.38
1878.....	2,405,482	89,324,971	17,018,968.79	37.13
1879.....	2,995,070	108,704,927	26,562,674.46	36.29
1880.....	3,554,396	101,421,718	24,926,079.07	28.53
1881.....	4,171,554	80,760,542	44,859,963.29	19.33
1882.....	4,441,836	157,005,722	51,838,366.27	35.36
1883.....	4,653,170	182,084,526	47,492,663.43	39.14
1884.....	4,545,908	190,870,686	39,512,734.32	41.99
1885.....	5,266,034	177,350,703	40,428,327.08	33.67
1886.....	5,802,018	139,569,132	37,966,031.80	24.05
1887.....	6,530,392	75,791,454	26,836,422.70	11.60
1888.....	6,993,207	168,754,087	52,395,945.65	24.13
1889.....	6,820,693	273,888,321	51,649,876.18	40.15
1890.....	5,775,691	51,090,229	21,491,916.00	8.84
1891.....	5,209,234	139,363,991	48,057,978.93	26.75
1892.....	5,603,588	138,658,621	42,089,849.01	24.74
1893.....	6,172,462	118,624,369	32,621,762.62	19.20
1894.....	6,404,705	66,952,833	25,354,190.27	10.45
1895.....	8,394,871	201,457,396	46,189,772.72	24.00
1896.....	7,897,575	221,419,414	35,633,013.17	28.03
1897.....	8,293,819	152,140,993	28,555,293.05	18.34
1898.....	7,237,601	126,999,132	30,298,097.93	17.54
1899.....	8,194,561	225,183,432	53,530,576.00	27.48
1900.....	7,369,020	134,523,677	39,581,835.00	18.25
1901.....	6,722,973	42,605,672	21,731,215.39	6.33
1902.....	6,990,764	201,367,102	78,321,653.26	28.80
1903.....	6,525,777	169,359,769	57,078,141.67	25.95
1904.....	6,494,158	132,021,774	50,713,955.74	20.33
1905.....	6,799,755	190,519,593	68,718,583.91	28.01
1906.....	6,584,535	187,021,214	65,115,203.01	28.40
1907.....	6,809,012	145,288,326	63,040,743.32	21.33
1908.....	7,057,535	150,640,516	82,642,461.72	21.34
1909.....	7,711,879	147,005,120	83,066,905.22	19.06
1910.....	8,589,682	152,810,884	76,402,327.52	17.79
1911.....	7,760,087	105,047,063	59,599,408.03	13.54
1912.....	6,884,044	156,499,382	83,483,681.05	22.73
1913.....	6,655,023	18,420,052	13,378,475.35	2.77
1914.....	5,279,552	87,338,272	59,320,146.75	16.54
1915.....	4,537,238	142,653,140	73,547,443.71	31.44
1916.....	6,964,724	62,127,191	51,886,271.52	8.92
1917.....	9,162,232	106,166,517	120,540,410.70	11.59
1918.....	6,195,624	44,539,488	64,081,655.56	7.19

OATS, 1860 to 1918.

TABLE showing acres, annual product, value, and average yield per acre.

YEARS.	Acres.	Bushels.	Values.	Average yield per acre.
				<i>bus.</i>
1860.....		80,744		
1861.....		88,818		
1862.....	2,936	96,892	\$30,037.00	33.00
1863.....	3,876	116,270	44,183.00	30.00
1864.....	5,051	146,500	141,372.00	29.00
1865.....	4,567	155,290	102,880.00	34.00
1866.....	5,136	200,316	94,148.00	39.00
1867.....	6,555	236,000	115,640.00	36.00
1868.....	9,880	247,000	140,790.00	25.00
1869.....	35,629	1,500,000	555,000.00	42.10
1870.....	117,079	3,688,000	1,475,300.00	31.50
1871.....	127,547	4,056,000	1,216,800.00	31.80
1872.....	187,200	6,084,000	1,338,480.00	32.50
1873.....	283,636	9,360,000	2,152,800.00	33.00
1874.....	314,926	7,700,586	4,064,424.00	24.25
1875.....	289,437	9,794,051	2,396,257.78	33.88
1876.....	391,845	12,386,216	2,707,736.51	31.61
1877.....	310,226	12,768,488	2,050,001.77	41.16
1878.....	444,191	17,411,473	2,937,900.63	39.19
1879.....	573,982	13,326,637	3,397,416.33	23.22
1880.....	477,827	11,483,796	2,918,689.17	24.03
1881.....	338,130	9,900,768	3,855,749.77	29.28
1882.....	529,234	21,946,284	5,766,579.15	41.46
1883.....	694,576	30,987,864	6,135,788.95	44.61
1884.....	780,831	29,087,294	5,563,332.75	37.25
1885.....	905,372	31,561,490	6,558,303.45	34.86
1886.....	1,181,807	35,892,985	8,860,603.55	30.37
1887.....	1,577,076	46,727,418	12,232,243.62	29.62
1888.....	1,656,814	54,665,055	12,470,908.35	32.99
1889.....	1,689,801	47,922,889	7,654,812.83	28.42
1890.....	1,227,371	29,175,582	9,174,400.00	23.77
1891.....	1,298,745	39,904,443	10,594,457.48	30.72
1892.....	1,559,049	43,722,484	11,140,224.70	28.04
1893.....	1,758,127	28,194,717	6,488,842.03	16.03
1894.....	1,427,444	18,385,469	5,071,543.74	12.88
1895.....	1,606,343	31,664,748	5,620,188.06	19.71
1896.....	1,477,844	19,314,772	2,706,652.80	13.06
1897.....	983,355	23,431,273	3,828,192.27	23.82
1898.....	1,054,900	21,702,537	4,268,861.10	20.57
1899.....	944,434	26,046,773	4,951,636.40	27.57
1900.....	1,058,259	31,169,982	6,626,443.82	29.45
1901.....	1,168,338	20,806,329	7,375,817.73	17.80
1902.....	1,023,171	32,966,114	9,564,254.35	32.21
1903.....	1,225,660	23,025,729	8,042,764.06	22.86
1904.....	1,265,043	21,819,257	6,872,890.26	17.24
1905.....	1,132,805	29,962,987	8,384,709.66	26.45
1906.....	1,193,003	26,560,919	7,760,395.66	22.26
1907.....	1,109,600	14,104,194	5,511,113.21	12.71
1908.....	831,159	16,707,979	7,118,847.22	20.10
1909.....	962,004	25,588,220	10,254,229.61	26.60
1910.....	1,707,312	53,993,474	18,441,607.62	31.62
1911.....	2,149,506	32,052,145	12,450,341.25	14.91
1912.....	1,512,660	42,298,386	16,074,547.72	27.96
1913.....	1,599,702	28,125,677	11,842,569.53	17.58
1914.....	1,462,891	45,348,857	17,780,294.58	31.00
1915.....	1,404,946	34,304,085	13,037,889.58	24.42
1916.....	1,461,127	29,177,688	14,199,056.16	19.97
1917.....	2,324,912	60,611,849	36,612,776.03	26.07
1918.....	2,363,563	50,482,487	35,562,383.33	21.36

ALFALFA, 1891 to 1918.

TABLE showing the acres of alfalfa in Kansas, with the value of the product after the year 1914.

YEARS.	Acres.	Value.*	YEARS.	Acres.	Value.*
1891.....	34,384	.....	1905.....	602,560	.....
1892.....	62,583	.....	1906.....	614,813	.....
1893.....	75,200	.....	1907.....	743,050	.....
1894.....	90,825	.....	1908.....	878,283	.....
1895.....	139,878	.....	1909.....	993,539	.....
1896.....	155,949	.....	1910.....	926,492	.....
1897.....	171,334	.....	1911.....	976,094	.....
1898.....	231,548	.....	1912.....	1,000,785	.....
1899.....	278,477	.....	1913.....	1,026,299	.....
1900.....	276,008	.....	1914.....	1,193,641	.....
1901.....	319,142	.....	1915.....	1,359,498	\$28,433,930
1902.....	458,493	.....	1916.....	1,189,351	30,907,618
1903.....	566,592	.....	1917.....	1,131,373	56,570,863
1901.....	557,569	.....	1918.....	1,227,875	58,751,741

* The value of alfalfa was not shown separately from other tame hay until 1915.

GRAIN SORGHUMS, 1894 to 1918.

TABLE showing the acres and value of product of the grain sorghums in Kansas.

YEARS.	Acres.	Values.	YEARS.	Acres.	Values.
1894.....	77,942	\$653,229	1907.....	533,007	\$5,919,197
1895.....	124,075	813,156	1908.....	688,582	7,407,517
1896.....	404,354	3,599,646	1909.....	741,983	8,145,508
1897.....	390,665	4,275,774	1910.....	727,426	9,128,497
1898.....	552,023	5,842,692	1911.....	1,099,032	16,337,291
1899.....	631,040	5,380,870	1912.....	1,609,219	21,982,042
1900.....	652,667	5,814,389	1913.....	1,637,701	13,537,511
1901.....	627,432	6,451,751	1914.....	1,287,259	19,373,528
1902.....	757,036	9,579,110	1915.....	1,546,238	22,074,348
1903.....	669,295	6,220,942	1916.....	1,365,055	14,527,210
1904.....	528,142	5,136,412	1917.....	2,136,915	43,835,544
1905.....	575,038	5,726,978	1918.....	1,990,635	45,966,394
1906.....	569,701	5,216,985			

LIVESTOCK, 1889 to 1918.

TABLE showing the numbers of the various kinds of livestock and their aggregate value.

YEARS.	Horses.	Mules and asses.	Milk cows.	Other cattle.	Sheep.	Swine.	Value.
1889.....	719,394	90,357	723,552	1,738,436	293,853	1,641,955	\$116,191,465
1890.....	716,459	78,346	674,705	1,696,081	281,654	2,192,231	113,533,342
1891.....	776,533	77,170	690,611	1,770,591	260,658	2,085,875	117,674,951
1892.....	804,923	79,262	631,386	1,708,368	240,568	1,605,098	109,024,141
1893.....	860,186	88,585	567,353	1,505,273	224,952	1,406,086	98,266,668
1894.....	864,651	86,729	524,127	1,291,793	166,384	1,623,375	78,738,754
1895.....	852,789	95,169	517,254	1,258,919	186,520	1,666,221	72,939,258
1896.....	846,841	93,448	515,075	1,305,307	182,236	1,833,091	73,565,900
1897.....	801,427	86,919	552,538	1,603,943	222,703	2,399,494	94,074,885
1898.....	777,828	84,223	605,925	1,998,140	207,482	2,786,071	113,227,933
1899.....	796,866	87,838	634,182	2,201,886	232,039	2,340,992	133,057,092
1900.....	786,888	89,064	712,582	2,443,043	200,301	2,286,734	143,457,753
1901.....	825,553	89,725	793,389	2,613,885	186,987	2,114,201	152,699,716
1902.....	811,594	95,671	791,844	2,555,800	136,753	1,427,302	155,107,412
1903.....	845,404	101,089	802,738	2,745,586	167,044	1,770,585	163,552,590
1904.....	835,580	103,436	792,712	2,757,542	167,721	2,127,482	159,010,755
1905.....	879,258	114,091	763,803	2,637,222	158,591	2,133,555	169,821,157
1906.....	862,596	115,362	711,152	2,377,330	176,177	2,177,125	177,429,816
1907.....	899,063	127,593	690,318	2,171,276	159,241	2,608,574	197,250,857
1908.....	928,956	144,997	687,432	1,953,435	136,191	2,705,057	197,510,878
1909.....	958,335	173,609	671,662	2,018,965	159,271	2,157,048	225,147,081
1910.....	966,747	189,969	641,570	1,878,641	175,250	1,753,825	234,878,692
1911.....	1,063,998	222,869	809,623	1,706,266	326,634	2,237,870	251,632,487
1912.....	1,045,426	232,751	886,063	1,520,263	208,755	1,713,433	255,166,533
1913.....	1,039,860	242,398	862,906	1,551,782	196,151	1,637,365	265,669,197
1914.....	1,071,434	243,844	856,883	1,430,150	130,638	1,451,761	261,955,494
1915.....	1,063,358	276,495	961,281	1,919,756	138,082	1,807,463	310,655,642
1916.....	1,056,124	296,007	1,077,067	2,200,848	181,481	1,576,568	341,020,835
1917.....	1,048,733	271,254	*580,213	2,337,592	180,877	1,356,703	352,664,883
1918.....	1,053,000	227,745	633,211	2,239,717	249,928	1,467,082	361,868,765

* Apparent decrease is attributed to a change in classification so as to include only cows kept solely for milk production. Returns of preceding years embraced many cows kept for raising beef animals.

PRODUCTS OF LIVESTOCK, 1889 to 1918.

TOTAL VALUE, to wit: Animals slaughtered and sold for slaughter, wool clip, butter and cheese manufactured, and poultry, eggs and milk sold.

YEARS.	Value.	YEARS.	Value.
1889.....	\$40,762,488.62	1904.....	\$67,272,262.84
1890.....	39,998,285.04	1905.....	69,828,806.62
1891.....	45,724,709.21	1906.....	81,571,923.62
1892.....	42,853,835.68	1907.....	97,324,193.47
1893.....	51,225,617.55	1908.....	87,678,468.30
1894.....	50,708,714.08	1909.....	88,624,467.06
1895.....	48,591,362.97	1910.....	101,276,925.38
1896.....	45,210,214.63	1911.....	106,060,402.42
1897.....	46,983,923.86	1912.....	95,757,113.13
1898.....	59,417,008.00	1913.....	105,538,579.72
1899.....	61,410,801.00	1914.....	94,872,021.88
1900.....	67,014,901.00	1915.....	89,058,708.15
1901.....	74,706,299.00	1916.....	95,781,850.51
1902.....	65,695,331.00	1917.....	112,089,514.76
1903.....	69,865,096.25	1918.....	145,865,048.08

LEADING STATES IN WHEAT PRODUCTION.

Aggregate yields and values in the five years ending with 1918.
(From Year Books of the U. S. Department of Agriculture.)

PRODUCTION—BUSHEL.

KANSAS.....	529,169,000
North Dakota.....	429,897,000
Minnesota.....	274,126,000
Nebraska.....	265,725,000
South Dakota.....	236,258,000
Illinois.....	208,066,000
Washington.....	185,516,000
Oklahoma.....	182,649,000

VALUE.

KANSAS.....	\$716,839,000
North Dakota.....	\$591,446,000
Minnesota.....	\$418,558,000
South Dakota.....	\$351,448,000
Nebraska.....	\$346,827,000
Illinois.....	\$316,460,000
Oklahoma.....	\$261,353,000
Washington.....	\$245,174,000

WHEAT, 1894 TO 1918.

DIAGRAM showing the relative product of wheat (winter and spring) in Kansas by five-year periods, with value noted.

(Compiled from the records of the State Board of Agriculture.)

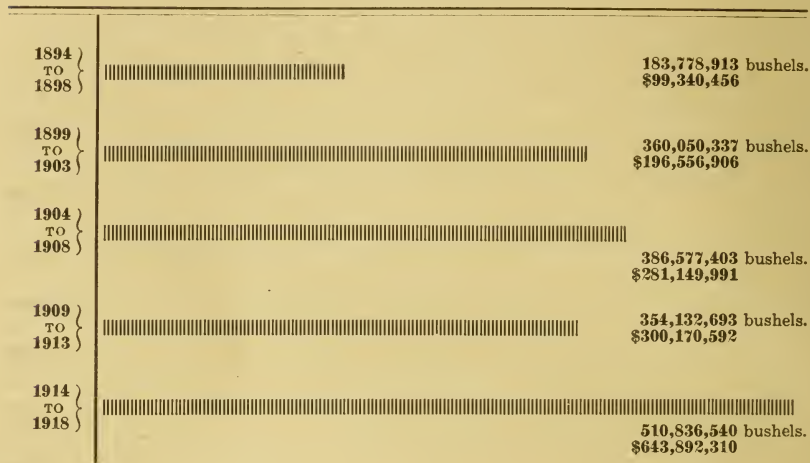
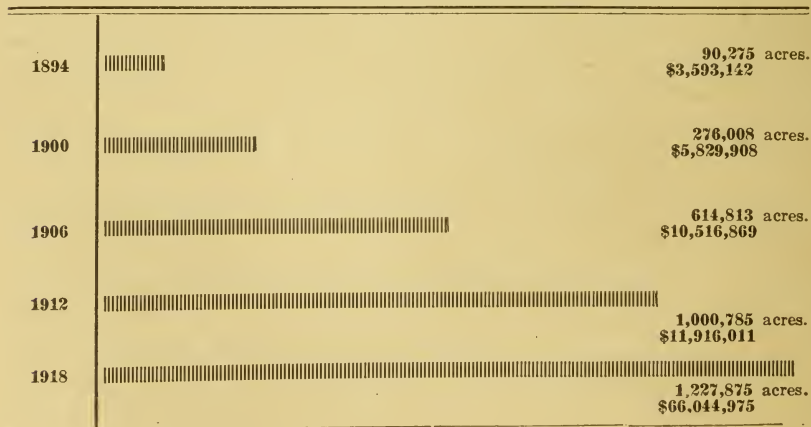
**ALFALFA AND VALUE OF TAME HAY.**

DIAGRAM showing the relative acreage of alfalfa in Kansas for 1894 and every sixth year thereafter, with value of tame hay (including alfalfa) noted.



SORGHUMS IN KANSAS.

DIAGRAM showing the relative acreage of all sorghums in 1894 and every fifth year thereafter, with value noted.

1894	|||||	297,577 acres. \$2,789,071
1899	|||||	1,079,838 acres. \$7,838,174
1904	|||||	1,099,175 acres. \$8,474,326
1909	|||||	1,204,298 acres. \$11,393,510
1914	|||||	1,756,510 acres. \$22,919,191
1918	|||||	2,854,330 acres. \$59,526,218

LIVESTOCK AND DAIRY PRODUCTS.

DIAGRAM showing the relative value of each in 1899 and every fifth year thereafter.

LIVESTOCK PRODUCTS. (Not including dairy products.)		
1899	|||||	\$54,882,493
1904	|||||	\$59,479,185
1909	|||||	\$76,282,367
1914	|||||	\$80,140,306
1918	|||||	\$123,110,123
DAIRY PRODUCTS.		
1899	|||||	\$6,528,308
1904	|||||	\$7,793,078
1909	|||||	\$12,342,100
1914	|||||	\$14,731,716
1918	|||||	\$22,754,925

1899 to 1918.

TWENTY years of agriculture in Kansas, home values—not including livestock.

	Livestock products.....	\$1,777,292,717
	Wheat.....	\$1,413,492,960
	Corn.....	\$1,265,781,096
	Hay.....	\$529,109,547
	Grain Sorghums.....	\$277,761,022
	Oats.....	\$258,464,569
	All other products.....	\$360,933,260

FIELD CROPS.

DIAGRAM showing the relative acreage of field crops in Kansas in 1899 and every fifth year there-
after, with value noted.

1899	18,362,749 acres. \$106,857,050
1904	18,150,666 acres. \$139,542,360
1909	20,065,292 acres. \$215,057,025
1914	21,006,296 acres. \$279,971,925
1918	22,249,594 acres. \$442,091,198

POPULATION OF CITIES OF KANSAS

Having 1000 inhabitants and more March 1, 1918, according to rank.

Rank.	CITIES.	Population.	Rank.	CITIES.	Population.
1	Kansas City.....	93,121	68	Arma.....	2,173
2	Wichita.....	62,404	69	Hoisington.....	2,172
3	Topeka.....	40,624	70	Norton.....	2,032
4	Hutchinson.....	23,401	71	Lindsborg.....	2,008
5	Leavenworth.....	21,849	72	Garnett.....	2,001
6	Pittsburg.....	18,048	73	Weir City.....	1,990
7	Parsons.....	17,286	74	Sterling.....	1,960
8	El Dorado.....	16,246	75	Seneca.....	1,915
9	Atchison.....	*15,240	76	Ellsworth.....	1,897
10	Coffeyville.....	13,465	77	Scammon.....	1,892
11	Lawrence.....	13,456	78	Sabetha.....	1,871
12	Salina.....	13,278	79	Caldwell.....	1,864
13	Fort Scott.....	12,325	80	Kingman.....	1,832
14	Independence.....	11,505	81	Kinsley.....	1,804
15	Emporia.....	10,842	82	Marion.....	1,785
16	Chanute.....	10,400	83	Minneapolis.....	1,776
17	Arkansas City.....	9,811	84	Ellis.....	1,707
18	Ottawa.....	9,489	85	Russell.....	1,702
19	Iola.....	9,291	86	Oakland.....	1,700
20	Junction City.....	8,507	87	Lincoln.....	1,693
21	Newton.....	8,183	88	Franklin.....	1,679
22	Manhattan.....	7,959	89	Chetopa.....	1,645
23	Rosedale.....	7,584	90	Sedan.....	1,626
24	Winfield.....	7,287	91	Osborne.....	1,567
25	Augusta.....	5,550	92	Smith Center.....	1,566
26	Wellington.....	5,507	93	Downs.....	1,542
27	Galena.....	5,120	94	Blue Rapids.....	1,540
28	Great Bend.....	5,023	95	Stafford.....	1,526
29	Dodge City.....	4,800	96	Saint John.....	1,504
30	Herington.....	4,738	97	Wamego.....	1,467
31	Cherryvale.....	4,684	98	Peabody.....	1,425
32	Abilene.....	4,465	99	Burlingame.....	1,423
33	Concordia.....	4,321	100	Washington.....	1,405
34	Pratt.....	4,250	101	Hillsboro.....	1,380
35	McPherson.....	4,216	102	Kiowa.....	1,377
36	Horton.....	4,046	103	Florence.....	1,362
37	Clay Center.....	4,031	104	Pleasanton.....	1,358
38	Neodesha.....	3,748	105	Cherokee.....	1,294
39	Fredonia.....	3,548	106	La Harpe.....	1,294
40	Garden City.....	3,504	107	Troy.....	1,287
41	Osawatimie.....	3,390	108	Arcadia.....	1,274
42	Girard.....	3,341	109	Radley.....	1,274
43	Columbus.....	3,309	110	Medicine Lodge.....	1,266
44	Larned.....	3,275	111	Oberlin.....	1,231
45	Beloit.....	3,162	112	Altoona.....	1,230
46	Frontenac.....	3,155	113	Ashland.....	1,226
47	Paola.....	3,137	114	Stockton.....	1,194
48	Olathe.....	3,125	115	St. Marys.....	1,180
49	Liberal.....	3,098	116	Bonner Springs.....	1,178
50	Osage City.....	3,076	117	Coldwater.....	1,177
51	Hiawatha.....	3,052	118	Phillipsburg.....	1,167
52	Hays.....	3,006	119	Valley Falls.....	1,163
53	Council Grove.....	2,931	120	Greensburg.....	1,155
54	Caney.....	2,747	121	Erie.....	1,147
55	Eureka.....	2,739	122	Towanda.....	1,147
56	Mulberry.....	2,682	123	Protection.....	1,145
57	Holton.....	2,645	124	Nickerson.....	1,100
58	Baxter Springs.....	2,639	125	Harper.....	1,098
59	Humboldt.....	2,490	126	Clyde.....	1,094
60	Lyons.....	2,435	127	Howard.....	1,086
61	Yates Center.....	2,330	128	Frankfort.....	1,082
62	Anthony.....	2,316	129	Baldwin.....	1,073
63	Burlington.....	2,310	130	Halstead.....	1,057
64	Marysville.....	2,309	131	Colby.....	1,022
65	Oswego.....	2,270	132	Mankato.....	1,020
66	Belleville.....	2,246	133	Scott City.....	1,017
67	Goodland.....	2,213	134	Hanover.....	1,002

Number of inhabitants in cities of above 10,000 inhabitants, 393,490.

Percent of inhabitants in cities of above 10,000 inhabitants, 22.7.

* Population March 1, 1917.

POPULATION, AREA, Etc., 1917 and 1918.

TABLE showing by counties, the date of organization, population and area.

COUNTIES.	Date of organization.	Population.		Area, 1918.	
		1917.	1918.	Land surface, acres.	Water surface, acres.
The State.....		1,736,900	1,734,636	52,404,276	94,802
Allen.....	1855	25,964	26,248	321,961	.....
Anderson.....	1855	11,890	12,230	371,200	.....
Atchison.....	1855	26,960	26,960	273,883	.....
Barber.....	1873	10,143	9,581	725,567	.....
Barton.....	1872	18,482	17,872	569,431	5,172
Bourbon.....	1855	25,378	25,220	406,615	.....
Brown.....	1855	20,069	20,933	364,662	.....
Butler.....	1855	30,915	46,659	921,424	.....
Chase.....	1859	6,651	6,641	496,262	.....
Chautauqua.....	1875	11,306	10,800	412,866	.....
Cherokee.....	1866	34,079	34,228	372,211	710
Cheyenne.....	1886	4,564	4,929	654,766	.....
Clark.....	1885	5,335	5,048	617,889	.....
Clay.....	1866	15,225	15,196	416,282	2,935
Cloud.....	1866	19,212	17,819	454,539	2,333
Coffey.....	1859	15,015	15,330	416,944	.....
Comanche.....	1885	5,945	5,353	504,299	.....
Cowley.....	1870	32,535	33,051	723,452	3,267
Crawford.....	1867	62,406	60,866	377,104	.....
Decatur.....	1880	8,333	8,023	573,683	.....
Dickinson.....	1857	26,058	26,112	540,426	1,729
Doniphan.....	1855	15,879	16,616	248,870	.....
Douglas.....	1855	25,052	25,087	296,800	2,088
Edwards.....	1874	7,095	6,865	392,513	3,853
Elk.....	1875	10,294	10,202	415,238	.....
Ellis.....	1867	14,331	13,843	575,653	.....
Ellsworth.....	1867	10,625	10,138	461,042	.....
Finney.....	1884	7,317	7,434	828,268	3,828
Ford.....	1873	15,648	14,311	688,667	5,917
Franklin.....	1857	22,605	23,300	365,945	.....
Geary.....	1855	10,745	12,794	255,230	2,407
Gove.....	1886	4,872	4,645	688,779	.....
Graham.....	1880	8,130	7,203	574,445	.....
Grant.....	1888	1,090	1,094	367,763	.....
Gray.....	1887	4,772	4,592	551,681	3,474
Greeley.....	1888	1,123	1,143	496,998	.....
Greenwood.....	1862	15,012	15,041	734,284	.....
Hamilton.....	1886	2,604	2,540	632,781	4,301
Harper.....	1873	13,308	12,698	512,126	.....
Harvey.....	1872	18,432	18,769	344,779	.....
Haskell.....	1887	1,625	1,720	368,228	.....
Hodgeman.....	1879	3,845	3,739	549,984	.....
Jackson.....	1857	15,208	14,668	420,191	.....
Jefferson.....	1855	15,035	15,063	357,848	1,306
Jewell.....	1870	16,601	15,963	585,644	563
Johnson.....	1855	17,617	17,129	304,386	1,408
Kearny.....	1888	2,594	2,593	552,086	3,877
Kingman.....	1873	12,169	11,300	551,952	.....
Kiowa.....	1886	6,948	6,283	459,612	.....
Labette.....	1867	34,999	35,231	413,566	850
Lane.....	1886	2,676	2,488	459,359	.....
Leavenworth.....	1855	40,830	41,130	290,242	1,250
Lincoln.....	1870	10,761	10,030	460,203	.....
Linn.....	1855	15,116	15,083	385,001	878
Logan.....	1888	3,554	3,521	688,170	.....

POPULATION, AREA, Etc., 1917 to 1918—CONCLUDED.

COUNTIES.	Date of organization.	Population.		Area, 1918.	
		1917.	1918.	Land surface, acres.	Water surface, acres.
Lyon.....	1858	25,637	25,950	546,066	.....
Marion.....	1865	21,928	21,519	609,149	.....
Marshall.....	1855	22,135	21,883	578,200	.....
McPherson.....	1870	21,986	21,775	575,172	117
Meade.....	1885	6,061	5,740	622,709	.....
Miami.....	1855	18,892	18,592	374,566	525
Mitchell.....	1870	14,758	13,862	458,577	.....
Montgomery.....	1869	49,717	48,052	415,186	.....
Morris.....	1858	11,676	12,163	449,510	.....
Morton.....	1886	2,497	2,517	465,311	.....
Nemaha.....	1855	18,810	18,413	459,707	.....
Neosho.....	1864	23,308	23,842	366,193	830
Ness.....	1880	7,225	6,998	686,372	.....
Norton.....	1872	11,815	11,398	565,257	.....
Osage.....	1859	20,034	20,544	458,580	.....
Osborne.....	1871	13,558	12,756	573,144	.....
Ottawa.....	1866	11,324	10,805	459,300	.....
Pawnee.....	1872	9,498	9,217	476,884	4,958
Phillips.....	1872	13,448	12,582	574,785	.....
Pottawatomie.....	1856	16,141	15,284	547,314	3,118
Pratt.....	1879	12,051	12,136	465,198	.....
Rawlins.....	1881	6,177	6,324	688,989	.....
Reno.....	1872	43,471	44,172	803,838	4,813
Republic.....	1868	17,005	16,408	458,261	1,813
Rice.....	1871	14,383	14,217	459,592	3,617
Riley.....	1855	16,083	17,682	396,414	3,415
Rooks.....	1872	11,010	10,127	573,972	.....
Rush.....	1874	8,876	8,139	458,074	.....
Russell.....	1872	11,630	11,129	574,653	.....
Saline.....	1859	23,041	23,589	460,494	.....
Scott.....	1886	3,293	3,184	459,030	.....
Sedgwick.....	1870	77,758	81,631	636,800	8,069
Seward.....	1886	6,087	6,006	409,884	.....
Shawnee.....	1855	64,192	60,215	350,903	3,530
Sheridan.....	1880	5,565	5,300	574,538	.....
Sherman.....	1886	4,768	4,821	675,931	.....
Smith.....	1872	15,571	15,025	575,160	.....
Stafford.....	1879	11,069	11,272	505,899	.....
Stanton.....	1887	969	1,016	434,520	.....
Stevens.....	1886	3,099	3,331	464,754	.....
Sumner.....	1871	27,568	26,277	753,908	2,684
Thomas.....	1885	5,046	5,008	687,145	.....
Trego.....	1879	6,254	6,151	575,003	.....
Wabaunsee.....	1859	11,799	11,530	505,803	2,077
Wallace.....	1888	2,006	2,219	583,658	.....
Washington.....	1860	18,869	18,606	572,232	.....
Wichita.....	1886	1,717	1,826	458,521	.....
Wilson.....	1865	20,253	20,600	366,716	.....
Woodson.....	1855	9,001	9,196	321,717	.....
Wyandotte.....	1859	112,864	110,252	96,887	3,090

STATE SUMMARY, 1917.

SHOWING the total acreage, quantities and values of farm products; also numbers and values of livestock.

CROPS.		Aeres.	Quantities.	Values.
Winter wheat.....	bu.	3,528,609	41,479,464	\$85,515,872.62
Spring wheat.....	bu.	17,824	83,923	163,338.60
Corn.....	bu.	9,162,232	106,166,517	120,540,410.70
Oats.....	bu.	2,324,912	60,611,849	36,612,776.03
Rye.....	bu.	111,718	1,293,371	2,144,208.05
Barley.....	bu.	855,250	4,010,860	4,013,192.61
Emmer ("speltz").....	bu.	642	5,234	3,465.52
Irish potatoes.....	bu.	62,418	3,303,341	4,788,660.92
Sweet potatoes.....	bu.	3,023	288,890	411,729.19
Cowpeas.....	tons	2,869	3,575	57,200.00
Flax.....	bu.	48,466	357,043	964,016.10
Broom corn.....	lbs.	61,984	18,571,095	2,495,998.73
Millet.....	tons	106,249	128,419	1,275,071.00
Sugar beets.....	tons	10,747	108,699	694,754.00
Sorghum: for syrup.....	gals.	6,981	422,118	295,482.60
for seed.....	bu.	80,920	598,235	966,264.31
for hay.....	tons	706,336	1,164,976	8,794,268.00
Milo: for grain.....	bu.	388,041	3,327,329	4,753,391.48
"stover".....	tons		355,710	1,660,903.00
for hay.....	tons	5,956	7,596	50,111.50
Kafir: for grain.....	bu.	1,408,418	11,818,215	16,809,377.52
"stover".....	tons		2,850,330	14,986,704.50
for hay.....	tons	72,020	153,587	1,061,026.00
Feterita: for grain.....	bu.	217,330	1,715,379	2,481,447.87
"stover".....	tons		240,050	1,237,913.00
for hay.....	tons	16,481	30,131	194,694.50
Jerusalem corn.....	tons	1,938	3,507	25,935.75
Sudan grass.....	tons	26,731	62,065	574,038.50
Alfalfa.....	tons	1,131,373	3,069,548	56,570,863.00
Timothy.....	tons	239,234		
Clover.....	tons	139,978		
Blue grass.....	tons	314,937		
Sweet clover.....	tons	24,304	†486,174	7,896,851.00
Orchard grass.....	tons	2,528		
Other tame grasses.....	tons	50,559		
Prairie hay.....	tons	1,121,912	1,031,986	14,782,475.00
Totals.....		22,252,920		\$392,822,441.60
OTHER PRODUCTS.				
Animals slaughtered or sold for slaughter.....				\$81,596,288.00
Poultry and eggs sold.....				14,159,909.00
Wool clip†.....	lbs.		360,857	101,039.96
Cheese.....	lbs.		49,605	8,464.85
Butter.....	lbs.		43,813,454	13,923,874.65
Condensed milk.....	lbs.		10,749,605	644,976.30
Milk sold.....				1,654,962.00
Horticultural products marketed†.....				2,251,434.00
Wood marketed.....				92,476.00
Honey and beeswax.....	lbs.		1,256,836	227,921.08
Total.....				\$114,661,345.84
Total value of all farm products.....				\$507,483,787.44

* Forage after harvesting grain. † Product of 1916.

LIVESTOCK.

SHOWING numbers as returned by assessors March 1, and values for the year 1917.

ANIMALS.	Numbers.	Values.
Horses.....	1,048,733	\$125,847,960.00
Mules and asses.....	271,254	36,619,290.00
Milk cows.....	580,213	43,515,975.00
Other cattle.....	2,337,592	116,879,600.00
Sheep.....	180,877	1,989,617.00
Swine.....	1,356,703	27,812,411.50
Total value of all livestock.....		\$352,664,883.50
Grand total farm products and livestock.....		\$860,148,670.94

STATE SUMMARY, 1918.

SHOWING the total acreage, quantities and values of farm products; also numbers and values of livestock.

CROPS.		Acres.	Quantities.	Values.
Winter wheat.....	bu.	6,770,784	93,008,941	\$185,976,944.61
Spring wheat.....	bu.	29,275	186,391	356,030.27
Corn.....	bu.	6,195,624	44,539,488	61,081,655.56
Oats.....	bu.	2,363,568	50,482,487	35,562,383.33
Rye.....	bu.	170,598	2,257,212	3,569,000.71
Barley.....	bu.	606,157	5,737,224	5,601,766.42
Emmer "speltz".....	bu.	850	10,685	8,107.39
Irish potatoes.....	bu.	63,358	2,652,004	3,748,761.00
Sweet potatoes.....	bu.	2,435	223,697	370,946.75
Cowpeas.....	tons	2,469	3,719	61,363.50
Flax.....	bu.	41,046	205,227	666,987.75
Broom corn.....	lbs.	57,992	18,582,438	1,791,974.98
Millet.....	tons	102,721	125,057	1,448,959.00
Sugar beets.....	tons	9,494	74,215	741,628.00
Sorghum: for syrup.....	gals.	10,134	421,310	463,441.00
for seed.....	bu.	231,622	2,052,361	3,746,295.56
for hay.....	tons	632,073	1,116,868	9,813,523.50
Milo: for grain.....	bu.	392,388	4,121,689	6,166,631.62
stover*.....	tons	.....	527,913	2,955,011.00
for hay.....	tons	9,084	16,025	119,769.50
Kafir: for grain.....	bu.	1,250,239	9,808,678	15,202,510.39
stover*.....	tons	.....	2,507,047	14,656,350.50
for hay.....	tons	56,863	118,910	919,535.50
Peterita: for grain.....	bu.	173,791	1,583,036	2,389,388.95
stover*.....	tons	.....	259,190	1,360,854.50
for hay.....	tons	26,656	54,202	402,882.00
Jerusalem corn.....	tons	2,448	5,224	41,738.50
Sudan grass.....	tons	79,166	165,704	1,751,721.50
Alfalfa.....	tons	1,227,875	2,746,460	58,751,741.00
Timothy.....	tons	217,722	.....	.....
Clover.....	tons	109,746	.....	.....
Blue grass.....	tons	311,704	.....	.....
Sweet clover.....	tons	23,552	†338,026	7,293,234.00
Orchard grass.....	tons	2,751	.....	.....
Other tame grasses.....	tons	55,361	.....	.....
Prairie hay.....	tons	1,015,045	634,208	12,070,049.00
Totals.....		22,249,594	.....	\$442,091,192.29
OTHER PRODUCTS.				
Animals slaughtered or sold for slaughter.....				\$108,073,032.00
Poultry and eggs sold.....				14,792,380.00
Wool clip†.....	lbs.	.....	453,168	244,710.72
Cheese.....	lbs.	.....	30,264	5,447.52
Butter.....	lbs.	.....	48,197,142	19,767,074.52
Condensed milk.....	lbs.	.....	12,939,302	1,161,949.32
Milk sold.....			.....	1,820,454.00
Horticultural products marketed†.....			.....	3,785,857.00
Wood marketed.....			.....	135,053.00
Honey and beeswax.....	lbs.	.....	558,960	140,099.15
Total.....			.....	\$149,926,057.23
Total value of all farm products.....			.....	\$592,017,249.52

* Forage after harvesting grain. † Product of 1917.

LIVESTOCK.

SHOWING numbers as returned by the assessors March 1, and values for the year 1918.

ANIMALS.	Numbers.	Values.
Horses.....	1,053,000	\$116,883,000.00
Mules and asses.....	227,745	31,884,300.00
Other cows.....	653,211	56,023,302.00
Other cattle.....	2,239,717	120,944,718.00
Sheep.....	249,928	3,124,100.00
Swine.....	1,467,082	33,009,345.00
Total value of all livestock.....	.....	\$361,868,765.00
Grand total of farm products and livestock.....	.....	\$953,886,014.52

Crop and Livestock Statistics, 1917 and 1918.

WINTER WHEAT, 1917.

TABLE showing the number of acres, product and value for the year 1917.

COUNTIES.	Acres sown.	Acres harvested.	Bushels.	Value.
The State.....	9,587,721	3,528,609	41,479,464	\$85,515,872.62
Allen.....	7,674	7,444	163,768	\$343,912.80
Anderson.....	4,576	4,576	100,672	203,357.44
Atchison.....	43,249	29,409	470,544	983,436.96
Barber.....	117,504	106,929	962,361	1,982,463.66
Barton.....	312,475	68,745	481,215	938,369.25
Bourbon.....	4,398	4,310	86,200	174,986.00
Brown.....	51,584	16,507	297,126	594,252.00
Butler.....	11,942	9,195	128,730	257,460.00
Chase.....	3,898	3,820	110,780	239,284.80
Chautauqua.....	4,062	3,900	66,300	134,589.00
Cherokee.....	64,257	61,687	801,931	1,603,862.00
Cheyenne.....	116,342	60,498	483,984	948,608.64
Clark.....	114,423	17,163	85,815	182,685.95
Clay.....	93,056	15,820	142,380	287,607.60
Cloud.....	137,908	16,549	148,941	306,818.46
Coffey.....	10,507	10,507	252,168	516,944.40
Comanche.....	141,813	69,488	416,928	813,009.60
Cowley.....	59,089	57,907	984,419	2,008,214.76
Crawford.....	31,095	30,473	426,622	853,244.00
Decatur.....	158,512	47,554	190,216	370,921.20
Dickinson.....	129,778	107,716	1,508,024	3,091,449.20
Doniphan.....	26,909	16,684	333,680	667,360.00
Douglas.....	34,380	31,286	625,720	1,332,783.60
Edwards.....	183,590	12,851	64,255	129,152.55
Elk.....	4,035	3,914	74,366	153,937.62
Ellis.....	235,395	16,478	32,956	69,207.60
Ellsworth.....	145,701	27,683	138,415	279,598.30
Finney.....	45,351	4,989	44,901	92,945.07
Ford.....	317,739	25,419	127,095	270,712.35
Franklin.....	14,485	14,050	309,100	621,291.00
Geary.....	23,833	17,398	295,766	621,108.60
Gove.....	130,724	15,687	47,061	98,828.10
Graham.....	173,513	24,292	72,876	145,752.00
Grant.....	6,084	183	549	1,152.90
Gray.....	130,800	10,464	31,392	66,551.04
Greeley.....	1,231	37	185	392.20
Greenwood.....	1,301	1,262	26,502	58,304.40
Hamilton.....	336	10	100	213.00
Harper.....	184,367	175,149	2,101,788	4,413,754.80
Harvey.....	101,778	71,245	1,068,675	2,212,157.25
Haskell.....	45,003	1,350	4,050	8,626.50
Hodgeman.....	117,134	10,542	52,710	111,745.20
Jackson.....	30,982	18,279	274,185	553,953.70
Jefferson.....	39,493	31,199	499,184	1,033,310.88
Jewell.....	70,771	2,123	12,738	26,622.42
Johnson.....	46,305	45,379	907,580	1,887,786.40
Kearny.....	7,259	1,161	10,449	22,151.88
Kingman.....	182,672	149,791	1,348,119	2,777,125.14
Kiowa.....	191,691	55,590	277,950	542,002.50
Labette.....	50,592	49,580	694,120	1,409,063.60

WINTER WHEAT, 1917—CONCLUDED.

COUNTIES.	Acres sown.	Acres harvested.	Bushels.	Value.
Lane.....	108,273	4,331	17,324	\$36,726.88
Leavenworth.....	46,832	40,744	733,392	1,547,457.12
Lincoln.....	143,867	34,528	207,168	403,977.60
Linn.....	8,198	7,706	146,414	307,469.40
Logan.....	33,019	2,311	9,244	19,689.72
Lyon.....	13,071	12,940	349,380	730,204.20
Marion.....	95,043	66,530	1,064,480	2,203,473.60
Marshall.....	62,173	13,056	195,840	407,347.20
McPherson.....	177,394	127,724	1,915,860	3,927,513.00
Meade.....	145,903	7,295	29,180	62,153.40
Miami.....	28,318	27,468	549,360	1,153,656.00
Mitchell.....	170,179	25,527	178,689	360,951.78
Montgomery.....	43,493	43,493	739,381	1,500,943.43
Morris.....	18,380	15,991	287,838	621,730.08
Morton.....	10,210	1,021	5,105	10,720.50
Nemaha.....	24,487	5,877	94,032	189,944.64
Neosho.....	26,420	25,627	486,913	983,564.26
Ness.....	154,078	7,704	30,816	65,021.76
Norton.....	122,860	43,001	172,004	335,407.80
Osage.....	12,611	12,359	296,616	605,096.64
Osborne.....	176,084	35,217	211,302	435,282.12
Ottawa.....	127,254	34,359	240,513	493,051.65
Pawnee.....	269,083	51,126	204,504	406,962.96
Phillips.....	126,706	13,938	55,752	108,716.40
Pottawatomie.....	20,358	13,029	234,522	487,805.76
Pratt.....	223,306	149,615	1,795,380	3,752,344.20
Rawlins.....	169,082	59,179	295,895	579,954.20
Reno.....	246,211	155,113	1,861,356	3,908,847.60
Republic.....	64,332	1,287	6,435	13,513.50
Rice.....	174,026	121,818	1,583,634	3,325,631.40
Riley.....	18,051	7,942	127,072	256,685.44
Rooks.....	220,318	11,016	33,048	70,061.76
Rush.....	221,050	11,053	44,212	92,845.20
Russell.....	205,259	67,735	338,675	660,416.25
Saline.....	137,551	82,531	1,155,434	2,414,857.06
Scott.....	42,638	853	4,265	9,041.80
Sedgwick.....	164,860	123,645	1,483,740	3,056,504.40
Seward.....	90,716	11,793	35,379	73,588.32
Shawnee.....	21,946	20,629	433,209	927,067.26
Sheridan.....	152,670	21,374	42,748	90,198.28
Sherman.....	37,930	6,827	27,308	55,708.32
Smith.....	103,439	3,103	12,412	25,196.36
Stafford.....	242,563	84,897	1,103,661	2,174,212.17
Stanton.....	81	5		
Stevens.....	36,171	3,617	18,085	38,521.05
Sumner.....	231,631	226,998	3,631,968	7,627,132.80
Thomas.....	198,969	39,794	159,176	315,168.48
Trego.....	136,554	13,655	40,965	86,436.12
Wabaunsee.....	20,335	18,302	420,946	905,033.90
Wallace.....	2,289	458	2,290	4,694.50
Washington.....	61,976	2,479	24,790	51,811.10
Wichita.....	11,845	948	1,896	3,943.68
Wilson.....	13,607	13,335	306,705	628,745.25
Woodson.....	3,761	3,723	85,629	179,820.90
Wyandotte.....	8,664	7,711	161,931	340,055.10

WINTER WHEAT, 1918.

TABLE showing the number of acres, product and value for the year 1918.

COUNTIES.	Acres sown.	Acres harvested.	Bushels.	Value.
The State.....	9,897,365	6,770,784	93,008,941	\$185,976,944.61
Allen.....	25,973	25,973	571,406	\$1,154,240.12
Anderson.....	23,401	23,401	514,822	1,050,236.88
Atchison.....	52,216	52,216	939,888	1,945,568.16
Barber.....	117,667	92,957	1,115,484	2,230,968.00
Barton.....	290,993	235,704	3,299,856	6,533,714.88
Bourbon.....	22,428	22,428	403,704	815,482.08
Brown.....	57,989	57,989	1,101,791	2,258,671.55
Butler.....	35,091	29,827	536,886	1,073,772.00
Chase.....	9,437	9,343	270,947	552,731.88
Chautauqua.....	13,094	12,963	246,297	492,594.00
Cherokee.....	80,054	80,054	1,360,918	2,749,054.36
Cheyenne.....	110,777	103,023	927,207	1,761,693.30
Clark.....	112,000	51,520	412,160	816,076.80
Clay.....	80,113	63,289	632,890	1,272,108.90
Cloud.....	97,614	23,427	140,562	274,095.90
Coffey.....	39,309	39,309	982,725	2,004,759.00
Comanche.....	125,718	100,574	1,206,888	2,413,776.00
Cowley.....	85,140	82,586	1,651,720	3,303,440.00
Crawford.....	50,170	50,170	852,890	1,722,837.80
Decatur.....	145,531	88,774	355,096	685,335.28
Dickinson.....	141,447	135,789	2,444,202	4,888,404.00
Doniphan.....	31,608	31,608	600,552	1,243,142.64
Douglas.....	52,209	52,209	1,253,016	2,568,632.80
Edwards.....	167,675	122,403	856,821	1,679,369.16
Elk.....	13,528	13,257	251,883	503,766.00
Ellis.....	220,249	158,579	1,427,211	2,711,700.90
Ellsworth.....	143,523	67,456	876,928	1,736,317.44
Finney.....	34,795	11,830	141,960	276,822.00
Ford.....	284,261	28,426	85,278	168,850.44
Franklin.....	39,167	39,167	900,841	1,837,715.64
Geary.....	26,779	26,243	472,374	963,642.96
Gove.....	116,695	5,835	11,670	22,756.50
Graham.....	155,588	32,673	98,019	186,236.10
Grant.....	2,040	530	2,650	5,247.00
Gray.....	127,114	15,254	45,762	90,608.76
Greeley.....	263	103	412	803.40
Greenwood.....	13,725	12,627	265,167	532,985.67
Hamilton.....	115	92	920	1,794.00
Harper.....	194,054	170,763	2,561,520	5,123,040.00
Harvey.....	109,294	102,736	1,613,776	3,287,552.00
Haskell.....	39,928	9,982	29,946	59,293.08
Hodgeman.....	113,472	20,425	61,275	119,486.25
Jackson.....	46,766	46,766	701,490	1,431,039.60
Jefferson.....	58,846	57,669	1,153,380	2,334,429.00
Jewell.....	85,848	76,405	1,069,670	2,075,159.80
Johnson.....	66,796	66,796	1,536,308	3,164,794.48
Kearny.....	1,510	378	4,914	9,582.30
Kingman.....	185,476	148,331	2,077,334	4,154,668.00
Kiowa.....	163,507	123,010	1,107,090	2,180,967.30
Labette.....	76,340	76,340	1,374,120	2,775,722.40
Lane.....	93,864	8,448	16,896	33,116.16
Leavenworth.....	59,443	59,443	1,307,746	2,693,956.76
Lincoln.....	131,501	18,410	147,280	287,196.00
Linn.....	27,394	27,394	602,668	1,229,442.72
Logan.....	23,035	2,534	15,204	29,617.80

WINTER WHEAT, 1918—CONCLUDED.

COUNTIES.	Acres sown.	Acres harvested.	Bushels.	Value.
Lyon.....	37,047	36,677	953,602	\$1,945,348.08
Marion.....	112,357	110,110	2,312,310	4,647,743.10
Marshall.....	68,143	64,736	776,832	1,569,200.64
McPherson.....	204,051	193,848	3,489,264	7,013,420.64
Meade.....	137,210	28,814	115,256	227,054.32
Miami.....	54,404	54,404	1,305,696	2,702,790.72
Mitchell.....	154,388	58,667	528,003	1,029,605.85
Montgomery.....	67,600	67,600	1,419,600	2,867,592.00
Morris.....	31,556	30,925	742,200	1,506,666.00
Morton.....	3,086	1,790	12,530	24,681.10
Nemaha.....	36,737	26,002	540,030	1,101,661.20
Neosho.....	46,317	46,317	1,065,291	2,151,887.82
Ness.....	164,372	92,048	644,336	1,237,125.12
Norton.....	121,908	63,392	253,568	486,850.56
Osage.....	38,047	38,047	913,128	1,871,912.40
Osborne.....	165,814	96,172	769,376	1,461,814.40
Ottawa.....	115,333	42,673	469,403	929,417.94
Pawnee.....	265,073	169,647	1,187,529	2,315,681.55
Phillips.....	124,924	74,954	449,724	863,470.08
Pottawatomie.....	27,871	26,756	428,096	873,315.84
Pratt.....	227,202	215,842	3,021,788	6,013,358.12
Rawlins.....	167,475	135,655	813,930	1,562,745.60
Reno.....	278,845	2,9,326	3,889,890	7,779,780.00
Republic.....	51,137	25,569	204,552	398,876.40
Rice.....	188,771	173,669	2,605,035	5,210,070.00
Riley.....	24,702	24,208	387,328	790,149.12
Rooks.....	195,623	70,424	492,968	936,639.20
Rush.....	216,448	119,046	714,276	1,357,124.40
Russell.....	192,502	132,826	1,328,260	2,576,824.40
Saline.....	135,436	127,310	2,164,270	4,328,540.00
Scott.....	31,944	1,917	5,751	11,271.96
Sedgwick.....	185,777	165,342	3,141,498	6,314,410.98
Seward.....	56,879	30,146	301,460	599,905.40
Shawnee.....	36,003	36,003	900,075	1,845,153.75
Sheridan.....	139,241	15,317	45,951	89,604.45
Sherman.....	40,934	30,291	212,037	402,870.30
Smith.....	106,833	83,330	749,970	1,439,942.40
Stafford.....	231,145	214,965	3,224,475	6,416,705.25
Stanton.....	378	30	150	295.50
Stevens.....	23,088	7,850	62,800	124,972.00
Sumner.....	267,421	235,330	4,235,940	8,471,880.00
Thomas.....	184,566	107,048	642,288	1,252,461.60
Trego.....	157,387	86,563	519,378	986,818.20
Wabauensee.....	30,998	30,998	743,952	1,525,101.60
Wallace.....	1,974	1,184	9,472	17,996.80
Washington.....	58,112	32,543	292,887	588,702.87
Wichita.....	6,173	2,716	13,580	26,752.60
Wilson.....	30,293	30,298	696,854	1,421,582.16
Woodson.....	14,959	14,660	293,200	595,196.00
Wyandotte.....	11,306	11,306	248,732	514,875.24

SPRING WHEAT.

TABLE showing the number of acres, product and value for the years 1917 and 1918.

COUNTIES.	1917.			1918.		
	Acres.	Bushels.	Value.	Acres.	Bushels.	Value.
The State	17,824	83,923	\$163,338.60	29,275	186,391	\$356,030.27
Allen				25	525	\$1,050.00
Anderson	2	42	\$82.32	20	420	848.40
Atchison				20	360	738.00
Barber						
Barton				20	220	435.60
Bourbon						
Brown				20	360	730.80
Butler				36	648	1,289.52
Chase						
Chautauqua	1	16	31.52			
Cherokee						
Cheyenne	6,510	39,060	74,214.00	8,963	52,848	98,297.28
Clark	125	250	515.00			
Clay				253	2,024	4,048.00
Cloud				727	5,816	11,283.04
Coffey						
Comanche						
Cowley						
Crawford	102	1,326	2,572.44			
Decatur				115	230	439.30
Dickinson				14	196	388.08
Doniphan						
Douglas	6	108	223.56			
Edwards						
Elk						
Ellis	4					
Ellsworth				50	550	1,028.00
Finney	105	420	844.20	163	815	1,572.95
Ford				10	30	58.50
Franklin						
Geary						
Gove	318	636	1,291.08	309	618	1,198.92
Graham				120	120	228.00
Grant				4	20	39.00
Gray	220	220	453.20	9	27	52.65
Greeley	200	320	659.20	85	425	820.25
Greenwood				38	722	1,436.78
Hamilton				100	600	1,158.00
Harper						
Harvey	203	2,639	5,304.39			
Haskell						
Hodgeman						
Jackson	13	195	386.10	50	575	1,150.00
Jefferson				20	360	723.60
Jewell				129	1,402	2,691.84
Johnson	55	900	1,999.80			
Kearny	105	525	1,081.50	399	2,793	5,390.49
Kingman						
Kiowa						
Labette				38	608	1,216.00
Lane	151			40	80	155.20
Leavenworth				443	9,746	19,784.38
Lincoln						
Linn	178	3,026	6,173.04			
Logan	182	364	753.48	200	1,248	2,408.64

SPRING WHEAT—CONCLUDED.

COUNTIES.	1917.			1918.		
	Acres.	Bushels.	Value.	Acres.	Bushels.	Value.
Lyon.....	10	260	\$525.20	16	288	\$573.12
Marion.....				78	780	1,560.00
Marshall.....	130	1,690	3,413.80	10	150	298.50
McPherson.....	60	780	1,552.20			
Meade.....						
Miami.....				25	200	386.00
Mitchell.....						
Montgomery.....						
Morris.....						
Morton.....						
Nemaha.....	18	252	493.92	111	1,443	2,900.43
Neosho.....						
Ness.....						
Norton.....	10	10	19.00	30	90	172.80
Osage.....				79	1,580	3,207.40
Osborne.....	10	30	60.00			
Ottawa.....	10	50	99.50	35	315	617.40
Pawnee.....						
Phillips.....				9	36	68.76
Pottawatomie.....				66	1,072	2,176.16
Pratt.....						
Rawlins.....	1,055	3,165	6,013.50	415	1,660	3,154.00
Reno.....				20	260	514.80
Republic.....	164	820	1,672.80	2,343	14,058	27,131.94
Rice.....				15	195	386.10
Riley.....				20	260	525.20
Rooks.....	15			2	10	19.00
Rush.....				5	15	28.50
Russell.....						
Saline.....				4	56	110.88
Scott.....	504			1,082	5,410	10,495.40
Sedgwick.....						
Seward.....				5	100	203.00
Shawnee.....				245	245	475.30
Sheridan.....	160					
Sherman.....	5,592	22,368	44,288.64	8,393	47,805	89,395.35
Smith.....	30	90	177.30	91	910	1,729.00
Stafford.....						
Stanton.....						
Stevens.....						
Sumner.....						
Thomas.....	702	1,404	2,695.68	1,352	5,408	10,275.20
Trego.....	76	76	155.80			
Wabawsee.....				30	600	1,218.00
Wallace.....	654	1,308	2,602.92	338	2,248	4,248.72
Washington.....	45	405	805.95	1,893	15,144	30,136.56
Wichita.....	50			87	435	848.25
Wilson.....						
Woodson.....	49	1,078	2,177.56			
Wyandotte.....				56	1,232	2,513.28

CORN.

TABLE showing the number of acres, product and value for the years 1917 and 1918.

COUNTIES.	1917.			1918.		
	Acres.	Bushels.	Value.	Acres.	Bushels.	Value.
The State.....	9,162,232	106,166,517	\$120,540,410.70	6,195,624	44,539,488	\$64,081,655.56
Allen.....	63,232	1,327,872	\$1,420,823.04	54,262	325,572	\$494,869.44
Anderson.....	65,288	1,305,760	1,397,163.20	52,759	369,313	557,662.63
Atchison.....	67,369	1,549,487	1,766,415.18	50,051	1,101,122	1,486,514.70
Barber.....	60,404	483,232	579,878.40	42,740	299,180	448,770.00
Barton.....	194,830	1,363,810	1,554,743.40	69,012	345,060	507,238.20
Bourbon.....	68,926	1,792,076	1,935,442.08	65,316	457,212	704,106.48
Brown.....	124,430	3,359,610	4,065,128.10	92,883	1,950,543	2,691,749.34
Butler.....	104,477	1,253,724	1,517,006.04	80,520	644,160	966,240.00
Chase.....	37,135	779,835	857,818.50	27,352	164,112	251,091.36
Chautauqua.....	31,161	218,127	266,114.94	17,278	51,834	79,824.36
Cherokee.....	58,823	823,522	889,403.76	44,245	176,980	270,779.40
Cheyenne.....	65,704	985,560	1,113,682.80	52,828	686,764	858,455.00
Clark.....	48,185	192,740	215,863.80	25,608	25,608	38,412.00
Clay.....	126,196	1,892,940	1,987,587.00	88,825	355,300	532,950.00
Cloud.....	154,181	1,541,810	1,680,572.90	129,110	258,220	387,330.00
Coffey.....	77,259	1,313,403	1,471,011.36	59,431	356,586	534,879.00
Comanche.....	51,438	154,314	171,288.54	18,594	37,188	55,782.00
Cowley.....	86,519	692,152	844,425.44	55,429	388,003	597,524.62
Crawford.....	58,530	1,463,250	1,565,677.50	58,972	294,860	442,290.00
Decatur.....	119,260	477,040	505,662.40	92,947	278,841	382,012.17
Dickinson.....	109,153	2,183,060	2,466,857.80	86,011	516,066	774,099.00
Doniphan.....	69,763	2,581,416	3,123,513.36	63,074	1,198,406	1,617,843.10
Douglas.....	55,926	1,118,520	1,263,927.60	44,523	627,522	909,906.90
Edwards.....	163,367	1,852,037	2,185,403.66	76,825	307,300	439,439.00
Elk.....	48,353	580,236	707,887.92	32,697	130,788	202,721.40
Ellis.....	115,281	230,562	272,063.16	33,206	66,412	99,618.00
Ellsworth.....	109,535	328,605	354,893.40	68,702	274,808	392,975.44
Finney.....	15,301	153,010	194,322.70	13,876	138,760	202,589.60
Ford.....	166,335	332,670	392,550.60	101,532	101,532	147,221.40
Franklin.....	67,421	1,348,420	1,456,293.60	46,821	421,389	636,297.39
Geary.....	37,069	741,380	837,759.40	31,057	248,456	360,261.20
Gove.....	52,524	52,524	59,352.12	48,262	96,524	142,855.52
Graham.....	164,225	.....	.....	141,598	283,196	404,970.20
Grant.....	1,540	12,320	15,400.00	2,640	26,400	39,600.08
Gray.....	53,534	214,136	254,821.84	21,128	84,512	122,542.40
Greeley.....	2,774	5,548	7,212.40	2,827	28,270	42,405.00
Greenwood.....	77,797	1,011,361	1,223,746.81	55,089	385,623	597,715.65
Hamilton.....	1,948	23,376	32,258.88	1,209	9,672	14,508.00
Harper.....	61,852	247,408	299,363.63	37,717	113,151	165,200.40
Harvey.....	74,095	1,185,520	1,304,072.00	52,290	313,740	464,335.26
Haskell.....	5,687	5,687	7,108.75	6,650	13,300	19,950.00
Hodgeman.....	59,633	59,633	71,619.60	35,353	70,706	102,523.70
Jackson.....	111,070	2,332,470	2,659,015.80	88,588	1,328,820	1,847,059.80
Jefferson.....	81,566	1,794,452	2,027,730.76	61,015	1,220,300	1,696,217.00
Jewell.....	237,456	1,899,648	2,089,612.80	162,025	2,268,350	3,221,057.00
Johnson.....	55,282	1,326,768	1,459,444.80	41,985	419,850	596,187.00
Kearny.....	2,574	15,444	21,312.72	3,182	44,548	66,822.00
Kingman.....	89,713	448,565	529,306.70	62,916	377,496	543,594.24
Kiowa.....	118,412	592,060	710,472.00	57,256	286,230	412,243.20
Labette.....	59,583	893,745	1,063,556.55	40,873	367,857	562,821.21
Lane.....	41,310	41,310	51,637.50	25,155	176,085	264,127.50
Leavenworth.....	46,328	1,065,544	1,204,061.72	34,604	692,080	982,753.60
Lincoln.....	126,921	126,921	152,305.20	63,167	126,334	189,501.00
Linn.....	93,585	2,058,870	2,223,579.60	62,529	375,174	570,264.48
Logan.....	34,874	104,622	127,638.84	24,592	196,736	275,430.40

CORN—CONCLUDED.

COUNTIES.	1917.			1918.		
	Acres.	Bushels.	Value.	Acres.	Bushels.	Value.
Lyon.....	92,772	1,948,212	\$2,240,443.80	73,137	731,370	\$1,133,623.50
Marion.....	133,405	2,534,695	2,712,123.65	94,336	566,016	870,664.64
Marshall.....	210,375	5,680,125	6,588,945.00	167,150	1,002,900	1,454,205.00
McPherson.....	110,291	1,433,783	1,548,485.64	72,750	436,500	646,020.00
Meade.....	31,344	62,688	78,360.00	19,301	57,903	85,117.41
Miami.....	76,026	1,824,624	1,970,593.92	55,982	447,856	685,219.68
Mitchell.....	174,454	1,221,178	1,343,295.80	127,669	255,338	372,793.48
Montgomery.....	39,630	277,410	341,214.30	24,527	73,581	110,371.50
Morris.....	78,696	1,810,008	1,936,708.56	66,182	397,092	595,638.00
Morton.....	3,680	11,040	14,904.00	2,682	37,548	54,444.60
Nemaha.....	156,544	3,913,600	4,539,776.00	134,514	2,152,224	2,970,069.12
Neosho.....	61,073	1,038,241	1,225,124.38	48,895	342,265	513,397.50
Ness.....	68,235	204,705	255,881.25	25,233	126,165	185,462.55
Norton.....	152,451	152,451	179,892.18	120,215	721,290	988,167.30
Osage.....	83,795	2,011,080	2,212,188.00	67,418	539,344	809,016.00
Osborne.....	150,957	150,957	188,696.25	97,978	489,890	734,835.00
Ottawa.....	114,397	686,382	755,020.20	95,862	383,448	563,668.56
Pawnee.....	131,782	1,186,038	1,399,524.84	52,694	316,164	471,084.36
Phillips.....	200,307	400,614	448,687.68	140,874	1,126,992	1,555,248.96
Pottawatomie.....	102,278	2,556,950	2,761,506.00	86,509	778,581	1,128,942.45
Pratt.....	97,777	1,173,324	1,372,789.08	46,890	328,230	472,651.20
Rawlins.....	81,555	488,130	566,230.80	49,440	197,760	257,088.00
Reno.....	208,018	2,496,216	2,970,497.04	130,492	1,174,428	1,679,432.04
Republic.....	180,714	1,987,854	2,246,275.02	149,816	599,264	874,925.44
Rice.....	111,708	1,340,496	1,528,165.44	66,593	532,744	761,823.92
Riley.....	81,894	2,047,350	2,170,191.00	64,517	580,653	847,753.38
Rooks.....	204,747	.....	.....	105,977	423,908	627,383.84
Rush.....	100,704	302,112	356,492.16	21,742	21,742	32,613.00
Russell.....	118,172	472,688	557,771.84	65,160	130,320	195,480.00
Saline.....	91,680	1,283,520	1,386,201.60	59,649	298,245	447,367.50
Scott.....	17,152	34,304	43,566.08	14,225	42,675	62,305.50
Sedgwick.....	150,510	1,354,590	1,652,599.80	106,958	962,622	1,443,933.00
Seward.....	18,857	18,857	23,571.25	6,988	34,940	52,060.60
Shawnee.....	70,113	1,752,825	1,998,220.50	53,004	901,068	1,270,505.88
Sheridan.....	75,611	.....	.....	56,178	56,178	81,458.10
Sherman.....	33,190	265,520	331,900.00	23,265	255,915	332,689.50
Smith.....	249,353	997,412	1,117,101.44	167,822	1,678,220	2,299,161.40
Stafford.....	184,593	3,507,267	4,068,429.72	76,391	993,083	1,390,316.20
Stanton.....	399	2,793	3,826.41	1,107	11,070	16,605.00
Stevens.....	7,183	93,379	126,995.44	3,501	28,008	40,611.60
Sumner.....	110,643	553,215	691,518.75	71,767	358,835	538,252.50
Thomas.....	68,552	411,312	514,140.00	43,731	87,462	119,822.94
Trego.....	100,208	400,832	452,940.16	42,455	169,820	254,730.00
Wabunsee.....	67,233	1,411,893	1,510,725.51	55,154	551,540	799,733.00
Wallace.....	9,049	45,245	55,198.90	7,980	143,640	193,914.00
Washington.....	164,794	2,801,498	3,165,692.74	143,436	430,308	645,462.00
Wichita.....	8,378	.....	.....	7,400	81,400	118,844.00
Wilson.....	52,367	837,872	1,030,582.56	37,326	223,956	347,131.80
Woodson.....	35,749	786,478	880,855.36	26,919	215,352	325,181.52
Wyandotte.....	8,848	256,592	320,740.00	6,397	140,734	208,286.32

OATS.

TABLE showing the number of acres, product and value for the years 1917 and 1918.

COUNTIES.	1917.			1918.		
	Acres.	Bushels.	Value.	Acres.	Bushels.	Value.
The State.....	2,324,912	60,611,849	\$36,612,776.03	2,363,568	50,482,487	\$35,562,383.33
Allen.....	18,053	631,855	\$379,113.00	22,444	673,320	\$457,857.60
Anderson.....	21,976	813,112	471,604.96	28,464	853,920	589,204.80
Atchison.....	27,064	1,190,816	690,673.28	21,017	525,425	352,034.75
Barber.....	6,165	73,980	53,265.60	11,400	228,000	173,280.00
Barton.....	32,245	354,695	248,286.50	22,961	459,220	344,415.00
Bourbon.....	20,252	749,324	442,101.16	30,128	723,072	484,458.24
Brown.....	42,253	2,112,650	1,246,463.50	31,368	972,408	641,789.28
Butler.....	38,815	1,009,190	645,881.60	53,311	1,386,086	970,260.20
Chase.....	3,847	122,357	79,532.05	5,524	171,244	123,295.68
Chautauqua.....	4,075	122,250	75,795.00	9,850	325,050	243,787.50
Cherokee.....	31,540	1,230,060	725,735.40	37,952	1,100,608	770,425.60
Cheyenne.....	3,792	56,880	38,678.40	3,317	29,853	22,389.75
Clark.....	10,904	.....	.....	14,458	28,916	23,132.80
Clay.....	60,720	1,821,600	1,074,744.00	49,505	891,090	605,941.20
Cloud.....	71,807	1,723,368	1,016,787.12	70,333	703,330	478,264.40
Coffey.....	24,649	838,066	477,697.62	32,658	914,424	640,096.80
Comanche.....	9,715	38,860	27,979.20	7,608	68,472	54,777.60
Cowley.....	26,482	820,942	541,821.72	28,950	839,550	621,267.00
Crawford.....	35,385	1,273,860	713,361.60	41,628	1,040,700	728,490.00
Decatur.....	9,665	48,325	30,928.00	9,116	36,464	27,348.00
Dickinson.....	45,962	1,516,746	925,215.06	38,671	928,104	696,078.00
Doniphan.....	17,514	735,588	419,285.16	16,501	429,026	296,027.94
Douglas.....	23,729	972,889	564,275.62	19,746	612,126	410,124.42
Edwards.....	16,909	101,454	74,061.42	9,862	69,034	51,085.16
Elk.....	6,533	202,523	127,589.49	13,769	385,532	289,149.00
Ellis.....	12,073	.....	.....	10,657	117,227	91,437.06
Ellsworth.....	21,637	194,733	128,523.78	24,626	566,398	419,134.52
Finney.....	8,073	.....	.....	5,527	71,851	53,888.25
Ford.....	44,884	.....	.....	67,650	67,650	52,767.00
Franklin.....	27,897	1,060,086	604,249.02	29,496	855,384	590,214.96
Geary.....	11,443	434,834	265,248.74	9,233	212,359	148,651.30
Gove.....	7,089	.....	.....	12,310	24,620	19,696.00
Graham.....	8,379	.....	.....	19,461	116,766	93,412.80
Grant.....	237	.....	.....	96	1,440	1,152.00
Gray.....	16,100	.....	.....	10,229	20,458	15,957.24
Greeley.....	47	.....	.....	151	453	339.75
Greenwood.....	6,242	218,470	139,820.80	14,297	414,613	302,667.49
Hamilton.....	8	.....	.....	.....	.....	.....
Harper.....	17,889	232,557	158,138.76	30,900	741,600	541,368.00
Harvey.....	44,486	1,245,608	772,276.96	33,985	713,685	520,990.05
Haskell.....	4,097	.....	.....	5,149	10,298	7,723.50
Hodgeman.....	11,594	.....	.....	13,334	13,334	10,000.50
Jackson.....	37,848	1,589,616	906,081.12	37,914	796,194	525,488.04
Jefferson.....	31,536	1,387,584	804,798.72	31,015	1,054,510	695,976.60
Jewell.....	38,327	689,886	427,729.32	26,298	657,450	447,066.00
Johnson.....	27,195	1,223,775	709,789.50	27,275	900,075	603,050.25
Kearny.....	1,035	.....	.....	892	20,516	15,387.00
Kingman.....	18,478	332,604	232,822.80	25,539	556,319	402,239.25
Kiowa.....	10,892	21,784	15,684.48	10,807	140,491	112,392.80
Labette.....	62,134	2,361,092	1,322,211.52	67,731	1,964,199	1,335,655.32
Lane.....	6,980	.....	.....	14,452	28,904	21,388.96
Leavenworth.....	20,972	838,880	503,328.00	18,956	625,548	419,117.16
Lincoln.....	19,808	198,080	132,713.60	11,617	162,638	123,604.88
Linn.....	20,901	668,832	374,545.92	26,273	630,552	428,775.36
Logan.....	2,584	.....	.....	1,777	3,554	2,665.50

OATS—CONCLUDED.

COUNTIES.	1917.			1918.		
	Acres.	Bushels.	Value.	Acres.	Bushels.	Value.
Lyon.....	16,884	658,476	\$428,009.40	27,963	727,038	\$523,467.36
Marion.....	64,338	2,187,492	1,312,495.20	61,768	1,914,808	1,340,365.60
Marshall.....	60,407	2,235,059	1,318,684.81	45,986	689,790	482,853.00
McPherson.....	58,973	1,592,271	987,208.02	40,360	1,049,360	776,526.40
Meade.....	18,055	.....	.....	25,712	51,424	41,139.20
Miami.....	37,318	1,530,038	856,821.28	33,803	1,149,302	770,032.34
Mitchell.....	32,352	549,984	357,489.60	33,941	678,820	488,750.40
Montgomery.....	33,920	1,153,280	715,033.60	43,026	1,290,780	903,546.00
Morris.....	16,500	495,000	316,800.00	19,617	568,893	403,914.03
Morton.....	244	.....	.....	26	312	249.60
Nemaha.....	45,388	1,724,744	1,034,846.40	42,710	640,650	422,829.00
Neosho.....	30,186	1,056,510	623,340.90	37,085	1,038,380	726,866.00
Ness.....	18,232	.....	.....	10,756	75,292	57,974.84
Norton.....	11,222	56,110	36,471.50	9,393	37,572	30,057.60
Osage.....	24,055	865,980	510,928.20	30,669	889,401	613,686.69
Osborne.....	17,615	123,305	82,614.35	24,553	441,954	327,045.96
Ottawa.....	36,924	553,860	365,547.60	37,481	674,658	492,500.34
Pawnee.....	25,492	76,476	53,533.20	18,696	205,656	158,335.12
Phillips.....	20,031	100,155	62,096.10	17,137	55,685	65,977.45
Pottawatomie.....	22,927	1,008,788	595,184.92	24,277	509,817	351,773.73
Pratt.....	13,423	241,614	176,378.22	10,354	196,726	149,511.76
Rawlins.....	10,650	74,550	50,694.00	4,571	13,713	10,284.75
Reno.....	43,371	1,084,275	715,621.50	33,838	778,274	583,705.50
Republic.....	53,508	1,391,208	820,812.72	49,760	845,920	566,766.40
Rice.....	16,495	346,395	221,692.80	16,685	517,235	387,926.25
Riley.....	21,740	847,860	500,237.40	17,819	427,656	295,082.64
Rooks.....	20,869	41,738	27,964.46	24,285	145,710	106,368.30
Rush.....	18,761	.....	.....	8,563	59,941	47,952.80
Russell.....	14,997	104,979	69,286.14	16,680	233,520	186,816.00
Saline.....	23,195	672,655	430,499.20	14,424	331,752	238,861.44
Scott.....	6,345	.....	.....	4,347	13,041	9,780.75
Sedgwick.....	58,944	1,591,488	986,722.56	71,052	1,989,456	1,392,619.20
Seward.....	5,321	.....	.....	4,505	40,545	32,436.00
Shawnee.....	17,259	828,432	513,627.84	18,585	650,475	429,313.50
Sheridan.....	15,824	.....	.....	7,145	7,145	5,716.00
Sherman.....	2,231	15,617	10,463.39	1,585	19,020	14,265.00
Smith.....	26,624	319,488	201,277.44	17,618	281,888	211,416.00
Stafford.....	18,708	486,408	355,077.84	7,249	181,225	132,294.25
Stanton.....	.....	.....	.....	.....	.....	.....
Stevens.....	1,972	.....	.....	1,113	3,339	2,671.20
Sumner.....	58,251	1,339,773	870,852.45	88,588	2,303,288	1,681,400.24
Thomas.....	6,487	19,461	13,038.87	7,432	7,432	5,574.00
Trego.....	13,332	.....	.....	7,829	70,461	54,254.97
Wabauwsee.....	13,570	474,950	294,469.00	16,862	539,584	372,312.96
Wallace.....	133	.....	.....	575	7,475	5,606.25
Washington.....	70,513	2,467,955	1,480,773.00	66,610	1,065,760	724,716.80
Wichita.....	577	.....	.....	1,053	3,159	2,369.25
Wilson.....	17,483	594,422	362,597.42	23,872	716,160	515,635.20
Woodson.....	9,127	319,445	191,667.00	14,745	368,625	265,410.00
Wyandotte.....	3,123	121,797	73,078.20	2,677	80,310	56,217.00

RYE.

TABLE showing the number of acres, product and value for the years 1917 and 1918.

COUNTIES.	1917.			1918.		
	Acres.	Bushels.	Value.	Acres.	Bushels.	Value.
The State.	111,718	1,293,371	\$2,144,208.05	170,598	2,257,212	\$3,569,000.71
Allen.	1,327	23,886	\$38,934.18	1,745	31,410	48,685.50
Anderson.	390	8,190	13,349.70	730	12,410	19,235.50
Atchison.	258	4,644	7,430.40	220	3,960	6,534.00
Barber.	1,947	9,735	17,036.25	1,253	15,036	24,057.60
Barton.	479	3,832	6,131.20	1,016	13,208	21,132.80
Bourbon.	101	1,818	2,981.52	275	4,125	6,806.25
Brown.	227	4,086	6,741.90	598	10,764	17,007.12
Butler.	1,764	28,224	47,980.80	3,565	57,040	90,693.60
Chase.	539	9,163	15,118.95	569	10,811	17,297.60
Chautauqua.	113	1,808	3,091.68	452	8,136	13,424.40
Cherokee.	44	660	1,141.80	74	1,110	1,809.30
Cheyenne.	582	5,820	10,185.00	1,567	14,103	22,564.80
Clark.	487	487	852.25	1,087	8,696	14,348.50
Clay.	249	3,486	5,926.20	1,112	14,456	22,985.04
Cloud.	863	11,219	19,296.68	1,381	13,810	22,096.00
Coffey.	718	13,642	22,509.30	2,369	45,011	69,767.05
Comanche.	1,017	5,085	8,898.75	869	9,559	15,581.17
Cowley.	2,326	34,890	59,313.00	2,656	50,464	80,742.40
Crawford.	1	14	23.80	34	510	836.40
Decatur.	680	3,400	5,950.00	937	5,622	9,276.30
Dickinson.	1,328	19,920	32,270.40	1,584	22,176	34,816.32
Doniphan.	61	1,098	1,866.60	134	2,278	3,599.24
Douglas.	611	10,908	18,806.58	825	17,325	27,373.50
Edwards.	743	5,944	10,223.68	1,319	7,914	12,662.40
Elk.	375	6,750	11,610.00	742	11,130	17,919.30
Ellis.	331	.....	.....	519	4,152	6,850.80
Ellsworth.	836	3,344	5,517.60	1,875	28,125	44,156.25
Finney.	2,047	8,188	14,329.00	325	3,250	5,362.50
Ford.	521	.....	.....	1,001	2,002	3,303.30
Franklin.	433	7,361	12,513.70	507	8,619	13,359.45
Geary.	616	12,320	20,328.00	987	13,818	21,417.90
Gove.	1,167	.....	.....	200	400	652.00
Graham.	256	.....	.....	2,675	8,025	13,241.25
Grant.	82	656	1,049.60	30	330	544.50
Gray.	802	.....	.....	1,769	5,307	8,756.55
Greeley.	117	.....	.....	86	258	425.70
Greenwood.	879	14,943	25,403.10	2,594	44,098	67,910.92
Hamilton. ....	.....	.....	.....	.....	.....	.....
Harper.	2,735	32,820	57,435.00	1,186	17,790	28,464.00
Harvey.	3,247	45,458	76,824.02	4,192	62,880	97,464.00
Haskell.	100	.....	.....	33	132	217.80
Hodgeman.	1,288	3,864	6,762.00	2,863	5,726	9,333.38
Jackson.	155	2,170	3,537.10	325	4,550	7,507.50
Jefferson.	336	6,384	10,788.96	380	6,840	11,286.00
Jewell.	915	6,405	11,208.75	2,503	35,042	57,819.30
Johnson.	217	4,123	7,091.56	309	6,489	10,706.85
Kearny.	41	205	358.75	52	364	600.60
Kingman.	3,660	32,940	52,704.00	4,034	60,510	96,816.00
Kiowa.	1,648	9,888	17,304.00	4,400	35,200	57,376.00
Labette.	196	2,352	4,045.44	216	3,240	5,216.40
Lane.	257	.....	.....	425	850	1,402.50
Leavenworth.	342	5,814	9,941.94	478	9,082	14,985.30
Lincoln.	492	2,460	4,157.40	1,458	16,038	25,179.66
Linn.	340	7,140	11,923.80	591	10,638	16,276.14
Logan.	300	.....	.....	75	300	480.00

RYE—CONCLUDED.

COUNTIES.	1917.			1918.		
	Acres.	Bushels.	Value.	Acres.	Bushels.	Value.
Lyon.....	518	8,288	\$13,923.84	968	15,488	\$24,471.04
Marion.....	3,688	55,320	90,724.80	7,023	119,391	183,862.14
Marshall.....	644	10,948	18,611.60	1,575	20,475	33,783.75
McPherson.....	8,249	115,486	184,777.60	10,960	197,280	305,784.00
Meade.....	402			758	3,790	6,253.50
Miami.....	99	1,782	3,011.58	91	1,456	2,329.60
Mitchell.....	1,072	8,576	15,008.00	1,996	23,952	38,323.20
Montgomery.....	351	4,212	7,244.64	849	11,886	19,611.90
Morris.....	709	14,889	24,566.85	649	11,033	17,652.80
Morton.....	336	1,344	2,150.40	764	6,876	11,345.40
Nemaha.....	415	6,640	11,088.80	1,057	15,855	26,160.75
Neosho.....	98	1,470	2,469.60	126	2,142	3,512.88
Ness.....	697			1,216	4,864	8,025.60
Norton.....	516	2,064	3,612.00	2,294	4,588	7,570.20
Osage.....	788	13,396	22,773.20	1,335	26,700	40,851.00
Osborne.....	1,115	4,460	7,805.00	3,366	33,660	55,539.00
Ottawa.....	2,459	24,590	41,557.10	3,660	51,240	81,471.60
Pawnee.....	676	3,380	5,610.80	1,436	14,360	23,119.60
Phillips.....	736			2,448	17,136	28,274.40
Pottawatomie.....	743	11,145	18,500.70	1,183	18,928	28,959.84
Pratt.....	1,940	21,340	36,061.60	2,781	33,372	54,396.36
Rawlins.....	92	276	483.00	586	2,930	4,688.00
Reno.....	8,041	88,451	144,175.13	14,754	206,556	320,161.80
Republic.....	261	2,349	4,110.75	1,904	20,944	33,510.40
Rice.....	1,986	23,832	38,846.16	3,438	48,132	74,604.60
Riley.....	579	9,264	15,470.88	1,324	21,184	32,411.52
Rooks.....	194			2,752	22,016	36,326.40
Rush.....	40			75	750	1,200.00
Russell.....	706	2,118	3,600.60	948	9,480	15,168.00
Saline.....	1,389	22,224	35,558.40	2,350	39,950	61,922.50
Scott.....	127			95	285	470.25
Sedgwick.....	7,115	106,725	181,432.50	6,357	108,069	167,506.95
Seward.....	1,153	2,306	3,689.60	1,827	20,097	33,160.05
Shawnee.....	481	9,139	15,444.91	473	9,933	16,389.45
Sheridan.....	631			185	370	610.50
Sherman.....	230	690	1,207.50	498	3,486	5,612.46
Smith.....	186	744	1,302.00	1,854	18,540	30,776.40
Stafford.....	1,531	21,435	34,296.00	5,559	72,267	112,013.85
Stanton.....	155	1,240	2,046.00			
Stevens.....	1,641	4,923	7,876.80	668	6,680	11,022.00
Sumner.....	13,236	211,776	340,959.36	7,358	110,370	176,592.00
Thomas.....	125	375	656.25	94	376	601.60
Trego.....	142			361	1,805	2,978.25
Wabaunsee.....	708	14,863	24,829.56	1,129	23,709	37,223.13
Wallace.....	265			130	650	1,040.00
Washington.....	1,162	17,430	30,328.20	2,861	34,332	54,931.20
Wichita.....	53			20	80	132.00
Wilson.....	844	10,972	18,652.40	1,790	32,220	53,163.00
Woodson.....	726	3,630	6,025.80	1,417	21,255	33,157.80
Wyandotte.....	82	1,640	2,820.80	55	1,155	1,963.50

BARLEY.

TABLE showing the number of acres, product and value for the years 1917 and 1918.

COUNTIES.	1917.			1918.		
	Acres.	Bushels.	Value.	Acres.	Bushels.	Value.
The State.....	855,250	4,010,860	\$4,013,192.61	606,157	5,737,224	\$5,601,766.42
Allen.....	29	754	\$769.08	41	820	\$836.40
Anderson.....	19	475	475.00	31	620	632.40
Atchison.....	29	870	878.70	120	3,000	3,060.00
Barber.....	597	7,164	7,092.36	260	3,640	3,822.00
Barton.....	21,560	258,720	258,720.00	13,393	241,074	243,484.74
Bourbon.....	5	125	126.25	13	260	273.00
Brown.....	873	26,190	26,190.00	230	6,900	7,245.00
Butler.....	5	125	125.00	59	1,357	1,451.99
Chase.....	23	690	690.00	42	1,050	1,155.00
Chautauqua.....				45	900	945.00
Cherokee.....				16	320	336.00
Cheyenne.....	39,236	392,360	392,360.00	27,770	305,470	281,032.40
Clark.....	9,270			3,967	11,901	11,901.00
Clay.....	1,138	25,036	25,036.00	1,466	21,990	23,089.50
Cloud.....	1,304	26,080	26,080.00	3,584	39,424	41,395.20
Coffey.....	11	275	275.00	85	1,700	1,785.00
Comanche.....	2,707	21,656	21,222.88	379	3,032	3,183.60
Cowley.....	20	400	400.00	13	364	389.48
Crawford.....						
Decatur.....	34,779	278,232	272,667.36	21,691	151,837	144,245.15
Dickinson.....	121	3,025	3,025.00	233	5,825	6,116.25
Doniphan.....	34	1,088	1,098.88	163	4,075	4,278.75
Douglas.....	18	450	454.50	2	54	55.08
Edwards.....	13,132	131,320	131,320.00	4,651	32,557	32,557.00
Elk.....	32	640	640.00	76	1,520	1,596.00
Ellis.....	25,010			12,655	151,860	151,860.00
Ellsworth.....	5,347	53,470	52,935.30	10,048	180,864	180,864.00
Finney.....	10,464	31,392	31,705.92	6,955	125,190	118,930.50
Ford.....	39,323			40,966	81,932	81,932.00
Franklin.....	56	1,400	1,400.00	40	880	880.00
Geary.....	74	1,850	1,850.00	8	200	210.00
Gove.....	34,021	102,063	103,083.63	27,996	223,968	212,769.60
Graham.....	21,721			23,698	189,584	189,584.00
Grant.....	1,140	6,840	6,840.00	928	12,064	11,460.80
Gray.....	21,490			7,515	22,545	22,545.00
Greeley.....	1,133	7,931	8,010.31	1,203	16,842	15,494.64
Greenwood.....	12	300	300.00	27	540	567.00
Hamilton.....	205	1,640	1,640.00	93	1,674	1,590.30
Harper.....	47	940	940.00	77	2,156	2,371.60
Harvey.....	563	12,949	12,949.00	694	13,880	15,268.00
Haskell.....	13,310	39,930	39,930.00	4,783	19,132	18,175.40
Hodgeman.....	26,947			16,890	33,780	33,104.40
Jackson.....	30	810	810.00	49	980	1,029.00
Jefferson.....	41	1,230	1,230.00	200	6,000	6,000.00
Jewell.....	1,913	24,869	24,869.00	2,417	45,923	45,923.00
Johnson.....	23	575	586.50	51	1,377	1,377.00
Kearny.....	2,570	7,710	7,941.30	2,594	51,880	49,286.00
Kingman.....	230	3,450	3,450.00	1,046	26,150	27,457.50
Kiowa.....	3,926	15,704	15,704.00	3,705	51,870	51,870.00
Labette.....	29	522	532.44	16	320	336.00
Lane.....	24,795			13,940	83,640	83,640.00
Leavenworth.....	14	350	367.50	33	825	825.00
Lincoln.....	1,462	21,930	21,930.00	700	12,600	13,104.00
Linn.....	68	1,836	1,836.00	133	2,660	2,660.00
Logan.....	21,035	63,105	63,105.00	17,032	153,288	145,623.60

BARLEY—CONCLUDED.

COUNTIES.	1917.			1918.		
	Acres.	Bushels.	Value.	Acres.	Bushels.	Value.
Lyon	138	4,140	\$4,140.00	178	5,340	\$5,874.00
Marion	176	5,280	5,280.00	394	9,850	10,835.00
Marshall	78	1,950	1,950.00	79	1,027	1,078.35
McPherson	1,465	36,625	36,258.75	2,150	51,600	56,760.00
Meade	30,219			13,313	26,626	26,626.00
Miami	7	175	175.00			
Mitchell	5,104	86,763	86,763.00	20,738	435,498	435,498.00
Montgomery	13	221	223.21	38	760	798.00
Morris	72	1,944	1,944.00	24	600	642.00
Morton	2,318	16,226	16,226.00	335	4,020	3,819.00
Nemaha	146	4,380	4,380.00	296	5,920	6,216.00
Neosho	11	231	237.93	13	260	273.00
Ness	27,255			6,449	38,694	38,694.00
Norton	27,962	223,096	219,222.08	29,107	261,963	261,963.00
Osage	11	297	297.00	102	2,550	2,677.50
Osborne	9,146	45,730	45,730.00	8,498	152,964	152,964.00
Ottawa	92	1,932	1,932.00	1,624	32,480	34,104.00
Pawnee	21,566	172,528	177,703.84	10,825	119,075	119,075.00
Phillips	18,517	74,068	76,290.04	15,879	142,911	138,623.67
Pottawatomie	64	1,600	1,600.00	119	2,380	2,499.00
Pratt	1,549	20,137	19,734.26	994	13,916	13,916.00
Rawlins	53,606	268,030	268,030.00	29,454	206,178	189,683.76
Reno	2,352	37,632	37,632.00	2,381	42,858	45,000.90
Republic	3,218	57,924	57,924.00	5,939	89,085	90,866.70
Rice	2,057	32,912	32,912.00	1,350	33,750	35,437.50
Riley	50	1,050	1,050.00	100	1,400	1,470.00
Rooks	21,397	64,191	64,191.00	17,056	170,560	170,560.00
Rush	16,883	50,664	50,664.00	3,317	26,536	26,536.00
Russell	6,580	72,380	74,551.40	5,114	76,710	76,710.00
Saline	1,293	25,860	25,860.00	884	17,680	18,564.00
Scott	11,893			7,011	42,066	40,804.02
Sedgwick	129	2,580	2,580.00	507	12,675	13,942.50
Seward	9,215	18,430	18,430.00	999	3,996	3,796.20
Shawnee	84	2,520	2,520.00	26	650	682.50
Sheridan	55,809	167,427	167,427.00	27,280	136,400	129,580.00
Sherman	35,333	317,997	317,997.00	32,804	426,452	392,335.84
Smith	4,173	66,763	63,771.04	5,169	93,042	93,042.00
Stafford	1,897	22,764	22,764.00	518	7,770	7,770.00
Stanton	169	1,690	1,690.00	82	820	779.00
Stevens	4,116	28,812	28,812.00	557	5,013	4,762.35
Sumner	36	720	720.00	44	1,232	1,355.20
Thomas	62,250	373,500	373,500.00	59,009	413,063	392,409.85
Trego	17,272			2,896	26,064	24,760.80
Wabauaunsee	50	1,500	1,500.00	230	5,750	6,037.50
Wallace	5,467	43,736	43,736.00	6,584	125,096	112,586.40
Washington	1,405	32,315	32,315.00	2,695	35,035	36,786.75
Wichita	10,644	42,576	43,427.52	8,115	73,035	69,383.25
Wilson	3	63	63.63			
Woodson				9	180	183.60
Wyandotte	14	420	441.00	50	1,400	1,400.00

EMMER ("SPELTZ").

TABLE showing the number of acres, product and value for the years 1917 and 1918.

COUNTIES.	1917.			1918.		
	Acres.	Bushels.	Value.	Acres.	Bushels.	Value.
The State.....	642	5,234	\$3,465.52	850	10,685	\$8,107.39
Allen.....						
Anderson.....						
Atchison.....				4	92	\$66.24
Barber.....	10	120	\$92.40			
Barton.....						
Bourbon.....	20	700	448.00	4	88	63.36
Brown.....						
Butler.....	50	1,200	828.00	42	1,050	787.50
Chase.....						
Chautauqua.....						
Cherokee.....				3	81	60.75
Cheyenne.....	65	845	616.85	37	259	207.20
Clark.....						
Clay.....						
Cloud.....				20	160	116.80
Coffey.....	30	750	450.00			
Comanche.....						
Cowley.....				1	24	18.00
Crawford.....						
Decatur.....						
Dickinson.....				1	22	17.60
Doniphan.....				13	312	230.88
Douglas.....						
Edwards.....				1	26	20.80
Elk.....						
Ellis.....						
Ellsworth.....						
Finney.....	110			17	255	204.00
Ford.....				25		
Franklin.....				8	232	171.68
Geary.....						
Gove.....	60			100	100	80.00
Graham.....				1	5	4.25
Grant.....						
Gray.....						
Greeley.....	20					
Greenwood.....						
Hamilton.....						
Harper.....						
Harvey.....						
Haskell.....						
Hodgeman.....	25					
Jackson.....	6	228	141.36	7	133	94.43
Jefferson.....	1	40	25.20	13	390	276.90
Jewell.....				22	506	369.38
Johnson.....	24	960	604.80			
Kearny.....						
Kingman.....				2	38	30.40
Kiowa.....						
Labette.....						
Lane.....						
Leavenworth.....	3	120	78.00	4	120	86.40
Lincoln.....						
Linn.....				4	92	67.16
Logan.....	15					

EMMER ("SPELTZ")—CONCLUDED.

COUNTIES.	1917.			1918.		
	Acres.	Bushels.	Value.	Acres.	Bushels.	Value.
Lyon.....						
Marion.....				14	406	\$304.50
Marshall.....						
McPherson.....				8	200	158.00
Meade.....				30	30	25.50
Miami.....						
Mitchell.....				36	648	466.56
Montgomery.....				9	243	170.10
Morris.....						
Morton.....						
Nemaha.....				17	221	156.91
Neosho.....				2	52	39.00
Ness.....						
Norton.....				30	90	76.50
Osage.....	2	64	\$40.96	14	378	279.72
Osborne.....						
Ottawa.....						
Pawnee.....				14	140	114.80
Phillips.....				1	4	3.28
Pottawatomie.....				7	133	98.42
Pratt.....						
Rawlins.....				15	30	24.00
Reno.....						
Republic.....				5	75	54.00
Rice.....						
Riley.....						
Rooks.....				7	35	27.30
Rush.....				17	102	86.70
Russell.....				4	48	40.80
Saline.....						
Scott.....						
Sedgwick.....						
Seward.....						
Shawnee.....				1	33	23.43
Sheridan.....	85					
Sherman.....				34	340	272.00
Smith.....						
Stafford.....						
Stanton.....						
Stevens.....						
Sumner.....	2	42	29.40			
Thomas.....						
Trego.....				45	360	295.20
Wabaunsee.....	5	165	110.55	40	1,200	888.00
Wallace.....	101			154	1,694	1,355.20
Washington.....				17	238	173.74
Wichita.....	8					
Wilson.....						
Woodson.....						
Wyandotte.....						

IRISH POTATOES.

TABLE showing the number of acres, product and value for the years 1917 and 1918.

COUNTIES.	1917.			1918.		
	Acres.	Bushels.	Value.	Acres.	Bushels.	Value.
The State.....	62,418	3,303,341	\$4,788,660.92	68,358	2,652,004	\$3,748,761.00
Allen.....	530	38,160	\$61,056.00	660	32,340	\$46,569.60
Anderson.....	556	33,360	50,040.00	592	29,600	44,400.00
Atchison.....	1,216	80,256	116,371.20	1,298	57,112	85,096.88
Barber.....	254	6,858	10,629.90	266	1,330	2,061.50
Barton.....	654	31,392	50,227.20	817	24,510	40,441.50
Bourbon.....	524	39,300	58,950.00	574	11,480	16,875.60
Brown.....	1,063	77,599	112,518.55	993	39,720	58,785.60
Butler.....	997	48,853	78,164.80	1,018	26,468	39,702.00
Chase.....	371	25,599	39,678.45	425	14,875	22,312.50
Chautauqua.....	344	13,760	20,640.00	354	8,142	12,213.00
Cherokee.....	339	22,374	34,679.70	515	14,935	20,909.00
Cheyenne.....	314	16,642	20,802.50	444	24,864	33,815.04
Clark.....	35	210	336.00	102	510	816.00
Clay.....	986	38,454	54,604.68	1,063	24,449	35,451.05
Cloud.....	778	27,230	35,399.00	649	6,490	10,319.10
Coffey.....	572	34,320	53,196.00	552	31,464	44,993.52
Comanche.....	154	3,850	6,352.50	136	.....	.....
Cowley.....	1,407	80,199	124,308.45	1,065	59,640	85,285.20
Crawford.....	296	23,976	38,361.60	781	17,182	25,257.54
Decatur.....	516	9,288	14,396.40	619	17,951	26,028.95
Dickinson.....	1,037	60,146	84,204.40	1,042	26,050	41,680.00
Doniphan.....	1,364	87,296	125,706.24	1,248	39,936	58,306.56
Douglas.....	1,255	94,125	117,656.25	1,541	123,280	143,004.80
Edwards.....	.....	.....	.....	.....	.....	.....
Elk.....	418	27,170	40,755.00	486	24,300	37,179.00
Ellis.....	418	5,434	8,694.40	531	6,903	10,699.65
Ellsworth.....	823	18,929	28,393.50	838	19,274	29,874.00
Finney.....	77	3,619	6,333.25	92	4,140	6,210.00
Ford.....	446	3,122	5,151.30	432	.....	.....
Franklin.....	768	54,528	84,518.40	725	32,625	46,653.75
Geary.....	437	25,783	38,674.50	392	14,896	22,344.00
Gove.....	153	3,060	4,590.00	108	2,160	3,110.40
Graham.....	374	5,984	9,275.20	400	2,400	3,720.00
Grant.....	.....	.....	.....	2	20	28.00
Gray.....	43	215	354.75	27	270	432.00
Greeley.....	4	.....	.....	25	625	906.25
Greenwood.....	815	33,415	48,451.75	696	28,536	42,804.00
Hamilton.....	1	30	52.50	2	80	120.00
Harper.....	263	17,358	27,772.80	290	1,450	2,392.50
Harvey.....	431	25,860	38,790.00	496	19,344	30,176.64
Haskell.....	17	170	280.50	16	160	240.00
Hodgeman.....	98	2,254	3,944.50	93	837	1,389.42
Jackson.....	986	68,034	98,649.30	1,003	38,114	57,933.28
Jefferson.....	1,556	119,812	161,746.20	1,453	113,334	150,734.22
Jewell.....	1,692	64,296	96,444.00	1,541	43,148	61,701.64
Johnson.....	1,246	140,798	190,077.30	1,054	86,428	110,627.84
Kearny.....	2	100	165.00	8	360	540.00
Kingman.....	289	8,670	13,005.00	432	9,936	15,897.60
Kiowa.....	60	1,200	1,920.00	90	1,080	1,738.80
Labette.....	267	22,962	32,606.04	389	8,947	13,420.50
Lane.....	85	1,275	2,103.75	130	2,990	4,724.20
Leavenworth.....	1,641	137,844	179,197.20	2,000	180,000	228,600.00
Lincoln.....	527	14,756	22,871.80	543	6,516	10,751.40
Linn.....	551	22,040	35,264.00	674	13,480	20,220.00
Logan.....	62	1,860	2,790.00	79	2,607	3,597.66

IRISH POTATOES—CONCLUDED.

COUNTIES.	1917.			1918.		
	Acres.	Bushels.	Value.	Acres.	Bushels.	Value.
Lyon.....	1,022	45,990	\$73,584.00	1,190	52,360	\$83,776.00
Marion.....	769	34,605	51,907.50	879	21,096	32,909.76
Marshall.....	1,593	100,359	140,502.60	1,694	32,186	46,025.98
McPherson.....	695	34,055	54,488.00	803	14,454	23,126.40
Meade.....	36	360	576.00	82	1,394	2,230.40
Miami.....	756	43,092	68,947.20	970	26,190	38,237.40
Mitchell.....	815	23,635	35,452.50	757	18,168	27,252.00
Montgomery.....	424	31,376	43,926.40	640	26,880	40,320.00
Morris.....	686	32,928	51,038.40	753	27,108	41,746.32
Morton.....	5	50	87.50			
Nemaha.....	1,330	87,780	123,769.80	1,354	41,974	62,961.00
Neosho.....	569	42,675	61,878.75	613	36,167	50,995.47
Ness.....	218	6,976	12,208.00	284	4,260	6,816.00
Norton.....	691	9,674	13,446.86	704	10,560	15,734.40
Osage.....	928	58,464	90,619.20	1,176	68,208	92,080.80
Osborne.....	834	12,510	18,765.00	781	18,744	28,865.76
Ottawa.....	572	17,732	26,598.00	607	13,961	22,337.60
Pawnee.....	321	10,272	17,462.40	389	9,336	15,777.84
Phillips.....	1,116	11,160	16,182.00	1,023	22,506	32,183.58
Pottawatomie.....	1,212	75,144	106,704.48	1,301	48,137	68,354.54
Pratt.....	382	7,640	12,988.00	245	3,675	5,880.00
Rawlins.....	375	9,375	12,656.25	529	12,696	19,044.00
Reno.....	1,068	56,604	84,906.00	1,212	24,240	38,784.00
Republic.....	1,236	51,912	75,272.40	1,387	15,257	23,953.49
Rice.....	469	26,264	39,396.00	547	11,487	18,723.81
Riley.....	764	45,840	66,009.60	606	24,240	34,663.20
Rooks.....	565	10,735	16,102.50	645	12,900	19,995.00
Rush.....	307	9,517	16,654.75	390	5,850	9,652.50
Russell.....	437	10,925	17,480.00	487	11,201	18,481.65
Saline.....	763	35,098	56,156.80	749	17,227	27,218.66
Scott.....	160	4,320	6,912.00	280	8,120	11,368.00
Sedgwick.....	861	32,718	51,694.44	1,027	37,999	60,038.42
Seward.....	18	234	386.10	33	495	742.50
Shawnee.....	2,163	192,507	240,633.75	2,831	254,790	308,295.90
Sheridan.....	266	4,788	7,182.00	326	1,956	2,836.20
Sherman.....	94	2,914	4,371.00	182	6,552	9,500.40
Smith.....	1,542	29,298	42,482.10	1,469	38,194	56,909.06
Stafford.....	368	14,720	22,080.00	414	7,452	12,295.80
Stanton.....						
Stevens.....	69			89	1,780	2,670.00
Sumner.....	622	32,344	47,545.68	825	28,875	44,756.25
Thomas.....	246	9,348	14,022.00	236	7,080	10,266.00
Trego.....	211	2,743	4,114.50	249	3,486	5,473.02
Wabunsee.....	865	57,090	85,635.00	818	62,168	92,008.64
Wallace.....	33	594	861.30	121	3,025	4,235.00
Washington.....	1,327	61,042	82,406.70	1,606	35,332	52,998.00
Wichita.....	27	405	648.00	42	1,050	1,522.50
Wilson.....	470	22,030	33,045.00	831	39,888	58,635.36
Woodson.....	346	16,954	26,278.70	462	30,492	45,738.00
Wyandotte.....	1,660	152,720	221,444.00	1,919	153,520	207,252.00

SWEET POTATOES.

TABLE showing the number of acres, product and value for the years 1917 and 1918.

COUNTIES.	1917.			1918.		
	Acres.	Bushels.	Value.	Acres.	Bushels.	Value.
The State.....	3,023	288,890	\$411,729.19	2,435	223,697	\$370,946.75
Allen.....	9	720	\$1,137.60	6	360	\$568.80
Anderson.....	4	200	290.00	10	500	875.00
Atchison.....	67	5,226	8,257.08	45	3,960	6,930.00
Barber.....	11	880	1,628.00	11	143	321.75
Barton.....	33	2,640	4,936.80			
Bourbon.....				6	228	399.00
Brown.....						
Butler.....	5	200	350.00	27	1,620	2,916.00
Chase.....	8	320	480.00			
Chautauqua.....	16	1,280	2,137.60	16	800	1,504.00
Cherokee.....	67	4,154	5,690.98	110	4,400	7,700.00
Cheyenne.....	1	50	75.00	5	100	200.00
Clark.....	4	60	120.00			
Clay.....						
Cloud.....				2	84	189.00
Coffey.....	1	90	135.00			
Comanche.....	3	225	450.00	2	20	45.00
Cowley.....	100	12,500	19,750.00	33	2,640	5,095.20
Crawford.....	19	1,197	1,915.20	181	5,973	10,452.75
Decatur.....						
Dickinson.....	75	5,400	9,180.00	69	4,485	8,970.00
Doniphan.....	12	876	1,462.92	12	888	1,776.00
Douglas.....	99	9,900	11,385.00	58	4,582	8,018.50
Edwards.....						
Elk.....	3	249	358.56	5	390	748.80
Ellis.....				1	30	67.50
Ellsworth.....	2	106	159.00			
Finney.....	36	4,320	7,041.60	20	2,540	5,715.00
Ford.....	2					
Franklin.....	40	4,320	6,955.20	3	216	382.32
Geary.....						
Gove.....						
Graham.....	1	50	100.00	1	30	67.50
Grant.....						
Gray.....	6	300	600.00	4	48	108.00
Greeley.....						
Greenwood.....	2	80	120.00			
Hamilton.....						
Harper.....	7	560	1,008.00			
Harvey.....	56	5,600	9,128.00	20	1,560	2,808.00
Haskell.....						
Hodgeman.....				2	8	18.00
Jackson.....						
Jefferson.....	8	560	604.80	3	210	315.00
Jewell.....						
Johnson.....	27	2,970	4,217.40	20	1,760	2,640.00
Kearny.....						
Kingman.....	7	546	955.50	5	125	250.00
Kiowa.....	1			1	23	51.75
Labette.....	50	5,000	7,050.00	45	3,600	6,588.00
Lane.....						
Leavenworth.....	3	306	324.36	13	1,170	1,755.00
Lincoln.....				11	385	866.25
Linn.....	10	1,000	1,440.00	2	66	115.50
Logan.....	1	40	80.00			

SWEET POTATOES—CONCLUDED.

COUNTIES.	1917.			1918.		
	Acres.	Bushels.	Value.	Acres.	Bushels.	Value.
Lyon.....						
Marion.....	21	1,260	\$2,016.00	6	270	\$540.00
Marshall.....	1	77	117.81	3	60	114.00
McPherson.....	6	600	1,050.00	3	126	252.00
Meade.....	1					
Miami.....	20	1,200	1,740.00	1	70	122.50
Mitchell.....						
Montgomery.....	21	1,785	2,499.00	64	3,200	6,240.00
Morris.....	4	240	384.00	7	350	700.00
Morton.....						
Nemaha.....	5	350	525.00			
Neosho.....	16	1,296	2,060.64	2	118	205.32
Ness.....				3	75	168.75
Norton.....						
Osage.....	3	270	437.40	2	140	245.00
Osborne.....				2	100	225.00
Ottawa.....	12	840	1,176.00	6	240	480.00
Pawnee.....	1	77	151.69			
Phillips.....						
Pottawatomie.....	314	35,168	50,290.24	200	19,600	37,632.00
Pratt.....	4	320	640.00	6	180	405.00
Rawlins.....						
Reno.....	170	13,600	22,032.00	99	2,475	4,950.00
Republic.....						
Rice.....	9	864	1,512.00	3	171	342.00
Riley.....	68	7,616	10,510.08	48	3,744	7,488.00
Rooks.....	2	160	320.00	3	156	351.00
Rush.....						
Russell.....				1	30	67.50
Saline.....	3	210	315.00			
Scott.....						
Sedgwick.....	346	17,992	31,486.00	197	11,032	17,982.16
Seward.....	1	50	100.00			
Shawnee.....	504	52,416	60,278.40	437	63,365	95,047.50
Sheridan.....						
Sherman.....				1	20	40.00
Smith.....						
Stafford.....	1	80	160.00	3	75	150.00
Stanton.....						
Stevens.....	1	75	150.00			
Sumner.....	33	2,706	4,816.68	32	1,696	3,222.40
Thomas.....						
Trego.....						
Wabunsee.....	186	14,508	23,212.80	136	17,680	31,824.00
Wallace.....						
Washington.....	4	400	600.00	1	20	40.00
Wichita.....	1	50	90.00			
Wilson.....						
Woodson.....	6	252	403.20	5	150	240.00
Wyandotte.....	463	62,505	83,131.65	415	55,610	83,415.00

COWPEAS.

TABLE showing the number of acres, product and value for the years 1917 and 1918.

COUNTIES.	1917.			1918.		
	Acres.	Tons.	Value.	Acres.	Tons.	Value.
The State.....	2,869	3,575	\$57,200.00	2,469	3,719	\$61,363.50
Allen.....	114	142	\$2,272.00	69	104	\$1,716.00
Anderson.....	40	50	800.00	10	15	247.50
Atchison.....	22	27	432.00			
Barber.....	20	25	400.00	3	5	82.50
Barton.....	10	12	192.00	10	15	247.50
Bourbon.....	183	229	3,664.00	44	66	1,089.00
Brown.....						
Butler.....	3	4	64.00	40	60	990.00
Chase.....						
Chautauqua.....	5	6	96.00	37	56	924.00
Cherokee.....	371	464	7,424.00	237	356	5,874.00
Cheyenne.....						
Clark.....				1	2	33.00
Clay.....				1	2	33.00
Cloud.....						
Coffey.....	12	15	240.00	29	44	726.00
Comanche.....				2	3	49.50
Cowley.....	45	56	896.00	74	111	1,831.50
Crawford.....	155	194	3,104.00	145	218	3,597.00
Decatur.....	25	31	496.00			
Dickinson.....	2	2	32.00			
Doniphan.....	6	7	112.00	9	14	231.00
Douglas.....	50	62	992.00	11	17	280.50
Edwards.....				10	15	247.50
Elk.....	6	7	112.00	19	29	478.50
Ellis.....				12	18	297.00
Ellsworth.....	10	12	192.00	1	2	33.00
Finney.....	6	7	112.00	56	84	1,386.00
Ford.....						
Franklin.....	5	6	96.00	5	8	132.00
Geary.....						
Gove.....						
Graham.....						
Grant.....						
Gray.....				10	15	247.50
Greeley.....	2	2	32.00			
Greenwood.....	94	117	1,872.00	127	191	3,151.50
Hamilton.....	2	2	32.00	12	18	297.00
Harper.....	35	44	704.00	3	5	82.50
Harvey.....	61	76	1,216.00	52	78	1,287.00
Haskell.....						
Hodgeman.....	10	12	192.00			
Jackson.....	25	31	496.00	2	3	49.50
Jefferson.....						
Jewell.....	2	2	32.00	16	24	396.00
Johnson.....	22	27	432.00	20	30	495.00
Kearny.....						
Kingman.....	3	4	64.00	31	47	775.50
Kiowa.....						
Labette.....	459	574	9,184.00	350	525	8,662.50
Lane.....						
Leavenworth.....	20	25	400.00	10	15	247.50
Lincoln.....				1	2	33.00
Linn.....	65	81	1,296.00	22	33	544.50
Logan.....	5	6	96.00	7	11	181.50

COWPEAS—CONCLUDED.

COUNTIES.	1917.			1918.		
	Acres.	Tons.	Value.	Acres.	Tons.	Value.
Lyon.....	23	29	\$464.00			
Marion.....	18	22	352.00	1	2	\$33.00
Marshall.....						
McPherson.....	17	21	336.00	8	12	198.06
Meade.....				41	62	1,023.00
Miami.....	15	19	304.00	35	53	874.50
Mitchell.....						
Montgomery.....	74	92	1,472.00	135	203	3,349.50
Morris.....	10	12	192.00	5	8	132.00
Morton.....	18	22	352.00			
Nemaha.....						
Neosho.....	81	101	1,616.00	61	92	1,518.00
Ness.....						
Norton.....	4	5	80.00			
Osage.....	19	24	384.00	7	11	181.50
Osborne.....						
Ottawa.....	17	21	336.00	14	21	346.50
Pawnee.....				2	3	49.50
Phillips.....						
Pottawatomie....	2	2	32.00	14	21	346.50
Pratt.....				7	11	181.50
Rawlins.....						
Reno.....	70	87	1,392.00	48	72	1,188.00
Republic.....				1	2	33.00
Rice.....	4	5	80.00	22	33	544.50
Riley.....	2	2	32.00			
Rooks.....						
Rush.....						
Russell.....				1	2	33.00
Saline.....						
Scott.....						
Sedgwick.....	161	201	3,216.00	138	207	3,415.50
Seward.....				63	95	1,567.50
Shawnee.....	39	49	784.00			
Sheridan.....						
Sherman.....						
Smith.....						
Stafford.....	4	5	80.00	25	38	627.00
Stanton.....	15	19	304.00			
Stevens.....	7	9	144.00	2	3	49.50
Sumner.....	140	186	2,976.00	78	117	1,930.50
Thomas.....						
Trego.....						
Wabunsee.....				2	3	49.50
Wallace.....	1	1	16.00			
Washington.....						
Wichita.....						
Wilson.....	192	240	3,840.00	231	347	5,725.50
Woodson.....	32	40	640.00	34	51	841.50
Wyandotte.....				6	9	148.50

FLAX.

TABLE showing the number of acres, product and value for the years 1917 and 1918.

COUNTIES.	1917.			1918.		
	Acres.	Bushels.	Value.	Acres.	Bushels.	Value.
The State.....	48,466	357,043	\$964,016.10	41,046	205,227	\$666,987.75
Allen.....	9,290	74,320	\$200,661.00	9,213	46,065	\$149,711.25
Anderson.....	604	3,926	10,600.20	304	1,672	5,434.00
Atchison.....						
Barber.....						
Barton.....						
Bourbon.....	6,519	52,152	140,810.40	4,603	23,015	74,798.75
Brown.....						
Butler.....	702	4,212	11,372.40	193	772	2,509.00
Chase.....	101	656	1,771.20			
Chautauqua.....	283	1,981	5,348.70	352	1,408	4,576.00
Cherokee.....	62	496	1,339.20	25	125	406.25
Cheyenne.....	1	6	16.20			
Clark.....						
Clay.....						
Cloud.....						
Coffey.....	1,861	12,096	32,659.20	818	4,499	14,621.75
Comanche.....						
Cowley.....				20	80	260.00
Crawford.....	1,924	15,392	41,558.40	1,052	5,260	17,095.00
Decatur.....						
Dickinson.....						
Doniphan.....				10	60	195.00
Douglas.....	609	4,872	13,154.40	233	1,631	5,300.75
Edwards.....						
Elk.....	386	2,316	6,253.20	1,666	6,664	21,658.00
Ellis.....						
Ellsworth.....						
Finney.....				2		
Ford.....						
Franklin.....	268	2,010	5,427.00	43	301	978.25
Geary.....				4	28	91.00
Gove.....						
Graham.....						
Grant.....						
Gray.....						
Greeley.....						
Greenwood.....	565	3,390	9,153.00	1,255	6,275	20,393.75
Hamilton.....	2	12	32.40			
Harper.....				4	16	52.00
Harvey.....						
Haskell.....						
Hodgeman.....	5					
Jackson.....				1	6	19.50
Jefferson.....						
Jewell.....	10	60	162.00			
Johnson.....	16	112	302.40	80	560	1,820.00
Kearny.....						
Kingman.....	8	48	129.60			
Kiowa.....	3	6	16.20			
Labette.....	311	2,488	6,717.60	118	590	1,917.50
Lane.....						
Leavenworth.....	50	350	945.00			
Lincoln.....						
Linn.....	7,585	53,095	143,356.50	5,716	28,580	92,885.00
Logan.....	10					

FLAX—CONCLUDED.

COUNTIES.	1917.			1918.		
	Acres.	Bushels.	Value.	Acres.	Bushels.	Value.
Lyon.....	371	2,782	\$7,511.40	51	306	\$994.50
Marion.....	25	150	405.00	11	55	178.75
Marshall.....						
McPherson.....						
Meade.....						
Miami.....	779	5,453	14,723.10	129	774	2,515.50
Mitchell.....						
Montgomery.....	265	2,120	5,724.00	419	2,095	6,808.75
Morris.....	12	72	194.40			
Morton.....						
Nemaha.....	20	120	324.00			
Neosho.....	8,629	56,088	151,437.60	8,107	40,535	131,738.75
Ness.....						
Norton.....						
Osage.....	900	7,650	20,655.00	361	2,527	8,212.75
Osborne.....						
Ottawa.....						
Pawnee.....						
Phillips.....						
Pottawatomie.....				6	36	117.00
Pratt.....						
Rawlins.....						
Reno.....	60	360	972.00			
Republic.....						
Rice.....						
Riley.....						
Rooks.....						
Rush.....						
Russell.....						
Saline.....						
Scott.....						
Sedgwick.....						
Seward.....						
Shawnee.....				12	84	273.00
Sheridan.....						
Sherman.....						
Smith.....						
Stafford.....						
Stanton.....						
Stevens.....						
Sumner.....	70	420	1,134.00	2	8	26.00
Thomas.....						
Trego.....						
Wabausee.....				10	70	227.50
Wallace.....						
Washington.....						
Wichita.....						
Wilson.....	4,712	37,696	\$101,779.20	4,890	24,450	79,462.50
Woodson.....	1,448	10,136	27,367.20	1,336	6,650	21,710.00
Wyandotte.....						

BROOM CORN.

TABLE showing the number of acres, product and value for the years 1917 and 1918.

COUNTIES.	1917.			1918.		
	Acres.	Pounds.	Value.	Acres.	Pounds.	Value.
The State.....	61,984	18,571,095	\$2,495,998.73	57,992	18,582,438	\$1,791,974.98
Allen.....	2,523	1,198,425	\$179,763.75	2,591	880,940	\$105,712.80
Anderson.....	55	22,000	3,300.00	21	6,300	693.00
Atchison.....	26	6,500	910.00	.....	.....	.....
Barber.....	5	2,000	280.00	55	16,500	1,650.00
Barton.....	30	9,000	1,260.00	10	3,000	375.00
Bourbon.....	7	3,325	498.75	40	12,000	1,320.00
Brown.....	2	500	70.00	.....	.....	.....
Butler.....	85	34,000	5,100.00	138	41,400	4,554.00
Chase.....	.....	.....	.....	.....	.....	.....
Chautauqua.....	50	22,500	3,375.00	22	6,600	660.00
Cherokee.....	58	27,550	3,857.00	52	15,600	1,560.00
Cheyenne.....	550	173,250	21,656.25	531	166,734	16,673.40
Clark.....	5	1,750	227.50	375	112,500	11,250.00
Clay.....	.....	.....	.....	10	2,500	250.00
Cloud.....	6	1,500	210.00	14	3,500	350.00
Coffey.....	1	400	56.00	2	600	60.00
Comanche.....	100	40,000	5,600.00	20	6,000	600.00
Cowley.....	124	55,800	8,370.00	182	54,600	6,279.00
Crawford.....	20	9,500	1,330.00	16	4,800	528.00
Decatur.....	25	7,500	975.00	70	22,750	2,275.00
Dickinson.....	9	2,700	378.00	.....	.....	.....
Doniphan.....	21	5,250	735.00	.....	.....	.....
Douglas.....	.....	.....	.....	.....	.....	.....
Edwards.....	.....	.....	.....	.....	.....	.....
Elk.....	45	20,250	3,037.50	10	3,000	300.00
Ellis.....	.....	.....	.....	.....	.....	.....
Ellsworth.....	.....	.....	.....	.....	.....	.....
Finney.....	2,301	632,775	85,424.63	1,656	496,800	49,680.00
Ford.....	225	73,125	9,506.25	95	28,500	2,850.00
Franklin.....	.....	.....	.....	69	20,700	2,070.00
Geary.....	.....	.....	.....	14	3,500	350.00
Gove.....	12	3,000	420.00	.....	.....	.....
Graham.....	17	5,100	688.50	65	19,500	1,950.00
Grant.....	2,595	778,500	101,205.00	2,656	836,640	83,664.00
Gray.....	69	20,010	2,601.30	3,017	1,055,950	105,595.00
Greeley.....	413	82,600	11,564.00	724	217,200	21,720.00
Greenwood.....	.....	.....	.....	5	1,500	150.00
Hamilton.....	7,417	1,854,250	241,052.50	5,342	1,789,570	161,061.30
Harper.....	.....	.....	.....	.....	.....	.....
Harvey.....	2	800	116.00	33	9,900	990.00
Haskell.....	128	38,400	5,184.00	1,051	341,575	34,157.50
Hodgeman.....	5	1,500	195.00	60	18,000	1,980.00
Jackson.....	5	1,500	210.00	1	250	25.00
Jefferson.....	.....	.....	.....	.....	.....	.....
Jewell.....	39	11,700	1,638.00	44	12,100	1,210.00
Johnson.....	36	10,800	1,512.00	4	1,200	120.00
Kearny.....	7,547	2,264,100	305,653.50	6,645	2,159,625	205,164.38
Kingman.....	3	1,200	168.00	.....	.....	.....
Kiowa.....	.....	.....	.....	3	900	90.00
Labette.....	419	199,025	27,863.50	300	90,000	9,000.00
Lane.....	25	6,250	875.00	.....	.....	.....
Leavenworth.....	.....	.....	.....	.....	.....	.....
Lincoln.....	.....	.....	.....	2	550	55.00
Linn.....	.....	.....	.....	28	8,400	924.00
Logan.....	165	37,125	5,197.50	165	49,500	4,950.00

BROOM CORN—CONCLUDED.

COUNTIES.	1917.			1918.		
	Acres.	Pounds.	Value.	Acres.	Pounds.	Value.
Lyon.....	4	1,400	\$196.00	4	1,200	\$120.00
Marion.....				10	3,000	300.00
Marshall.....	15	3,750	525.00			
McPherson.....	140	56,000	7,840.00	188	56,400	6,768.00
Meade.....	588	176,400	22,932.00	2,285	783,755	78,375.50
Miami.....	16	5,600	812.00	15	4,500	450.00
Mitchell.....						
Montgomery.....				16	4,800	480.00
Morris.....	10	3,000	420.00	5	1,500	150.00
Morton.....	6,259	1,564,750	203,417.50	3,631	1,332,577	113,269.05
Nemaha.....						
Neosho.....	416	197,600	27,664.00	553	182,490	20,986.35
Ness.....				80	24,000	2,520.00
Norton.....	30	9,000	1,170.00	10	3,000	300.00
Osage.....	5	1,625	227.50			
Osborne.....				30	8,250	825.00
Ottawa.....	5	1,375	192.50	5	1,250	125.00
Pawnee.....	360	108,000	14,040.00	25	7,500	900.00
Phillips.....	30	9,000	1,215.00	115	34,500	3,450.00
Pottawatomie.....						
Pratt.....						
Rawlins.....				305	106,750	10,675.00
Reno.....	1,090	381,500	53,410.00	966	289,800	34,776.00
Republic.....	36	9,900	1,386.00	56	14,000	1,400.00
Rice.....	1,367	410,100	59,464.50	1,227	368,100	46,012.50
Riley.....	10	2,750	385.00			
Rooks.....						
Rush.....				15	4,500	517.50
Russell.....				25	6,875	756.25
Saline.....						
Scott.....	40	10,000	1,500.00	75	22,500	2,250.00
Sedgwick.....	90	36,000	5,220.00	72	21,600	2,592.00
Seward.....	3,769	1,281,460	166,589.80	4,151	1,299,263	123,429.99
Shawnee.....						
Sheridan.....				20	6,000	600.00
Sherman.....	35	10,500	1,312.50	50	15,000	1,500.00
Smith.....	12	3,600	486.00	10	2,750	275.00
Stafford.....	105	31,500	4,252.50	70	21,000	2,520.00
Stanton.....	6,988	2,096,400	272,532.00	4,257	1,277,100	108,553.50
Stevens.....	11,893	3,567,900	463,827.00	11,299	3,457,494	311,174.46
Sumner.....	615	276,750	41,512.50	354	123,900	15,487.50
Thomas.....				96	28,800	2,880.00
Trego.....	20	5,000	675.00	6	1,800	180.00
Wabaunsee.....	8	2,400	336.00			
Wallace.....	2,558	511,600	81,856.00	1,406	421,800	42,180.00
Washington.....	40	10,000	1,400.00	62	15,500	1,550.00
Wichita.....				200	60,000	6,000.00
Wilson.....	157	74,575	10,440.50	97	29,100	2,910.00
Woodson.....	102	45,900	6,655.50	55	16,500	1,650.00
Wyandotte.....	1	300	42.00	8	2,400	240.00

MILLET.

TABLE showing the number of acres, product and value for the years 1917 and 1918.

COUNTIES.	1917.			1918.		
	Acres.	Tons.	Value.	Acres.	Tons.	Value.
The State.....	106,249	128,419	\$1,275,071.00	102,721	125,057	\$1,448,959.00
Allen.....	519	908	\$9,988.00	468	585	\$7,020.00
Anderson.....	149	261	2,610.00	170	255	2,805.00
Atchison.....	220	440	4,400.00	142	284	3,124.00
Barber.....	319	479	4,790.00	393	393	4,716.00
Barton.....	439	659	6,590.00	260	520	6,240.00
Bourbon.....	254	508	5,080.00	225	338	3,718.00
Brown.....	37	74	740.00	18	36	396.00
Butler.....	1,057	1,586	17,446.00	554	831	9,972.00
Chase.....	106	186	1,581.00	137	206	2,266.00
Chautauqua.....	278	765	8,415.00	279	419	4,609.00
Cherokee.....	165	371	3,710.00	218	327	3,597.00
Cheyenne.....	2,071	2,589	22,006.50	2,899	4,349	43,490.00
Clark.....	30	23	241.50	48	36	396.00
Clay.....	2,112	3,163	28,512.00	1,177	1,766	19,426.00
Cloud.....	1,315	1,973	17,757.00	619	619	7,428.00
Coffey.....	248	372	3,720.00	201	302	3,322.00
Comanche.....	9	9	90.00	89	67	737.00
Cowley.....	636	1,272	13,992.00	304	532	6,384.00
Crawford.....	193	386	3,860.00	253	380	4,180.00
Decatur.....	3,124	4,686	42,174.00	3,887	4,859	53,449.00
Dickinson.....	506	1,139	8,542.50	347	521	5,731.00
Doniphan.....	1	2	20.00	4	8	88.00
Douglas.....	225	450	4,500.00	153	306	3,366.00
Edwards.....	100	125	1,125.00	228	171	1,881.00
Elk.....	199	299	2,990.00	80	120	1,320.00
Ellis.....	2,134	2,134	21,340.00	1,505	1,129	13,548.00
Ellsworth.....	359	539	5,390.00	311	544	6,528.00
Finney.....	505	505	5,050.00	520	520	5,720.00
Ford.....	500	500	5,000.00	535	401	4,411.00
Franklin.....	302	453	4,530.00	146	256	2,816.00
Geary.....	267	601	5,409.00	228	456	5,016.00
Gove.....	4,836	2,418	26,598.00	4,834	3,626	43,512.00
Graham.....	2,415			2,186	1,640	18,040.00
Grant.....	60	60	600.00	16	16	176.00
Gray.....	67	67	670.00	510	510	5,610.00
Greeley.....	518	259	2,849.00	345	345	3,450.00
Greenwood.....	616	1,232	12,320.00	145	254	3,048.00
Hamilton.....	33	25	250.00	28	28	308.00
Harper.....	524	1,048	10,480.00	670	1,005	12,060.00
Harvey.....	227	341	3,751.00	136	204	2,448.00
Haskell.....				167	167	1,837.00
Hodgeman.....	557	557	5,570.00	990	743	8,916.00
Jackson.....	1,828	3,656	40,216.00	1,353	3,044	36,528.00
Jefferson.....	504	1,008	11,088.00	178	401	4,411.00
Jewell.....	4,009	4,009	44,099.00	2,546	3,819	45,828.00
Johnson.....	21	42	420.00	29	58	638.00
Kearny.....	40	40	400.00	12	12	132.00
Kingman.....	697	1,394	14,637.00	775	775	9,300.00
Kiowa.....				69	69	828.00
Labette.....	308	616	6,776.00	106	159	1,749.00
Lane.....	2,506	1,253	12,530.00	3,540	3,540	42,480.00
Leavenworth.....	293	366	3,660.00	196	392	4,312.00
Lincoln.....	293	293	2,930.00	410	513	6,156.00
Linn.....	404	808	8,080.00	135	203	2,233.00
Logan.....	2,726	2,045	20,450.00	2,875	2,875	34,500.00

MILLET—CONCLUDED.

COUNTIES.	1917.			1918.		
	Acres.	Tons.	Value.	Acres.	Tons.	Value.
Lyon.....	323	646	\$5,814.00	158	277	\$3,047.00
Marion.....	1,123	1,685	15,165.00	981	1,226	13,486.00
Marshall.....	5,959	11,918	107,262.00	8,541	12,812	166,556.00
McPherson.....	1,190	1,785	17,850.00	550	638	7,568.00
Meade.....	316	158	1,738.00	527	527	5,797.00
Miami.....	291	582	5,820.00	110	193	2,123.00
Mitchell.....	753	1,130	12,430.00	689	689	8,263.00
Montgomery.....	317	634	6,340.00	331	497	5,467.00
Morris.....	2,354	4,708	40,018.00	2,379	4,163	45,793.00
Morton.....						
Nemaha.....	3,735	7,470	67,230.00	5,000	7,500	97,500.00
Neosho.....	262	524	5,240.00	80	100	1,100.00
Ness.....	2,080	2,600	26,000.00	3,087	2,315	27,780.00
Norton.....	3,153	1,577	15,770.00	2,424	2,424	26,664.00
Osage.....	394	591	5,910.00	407	814	8,954.00
Osborne.....	712	712	7,120.00	652	652	7,172.00
Ottawa.....	539	539	5,390.00	302	453	4,983.00
Pawnee.....	338	592	5,328.00	347	521	6,252.00
Phillips.....	3,124	1,562	17,182.00	2,004	2,004	24,048.00
Pottawatomie.....	1,845	4,151	45,661.00	1,960	2,940	35,280.00
Pratt.....	161	201	2,010.00	225	225	2,700.00
Rawlins.....	1,401	2,101	18,909.00	1,705	2,131	21,310.00
Reno.....	725	1,088	11,968.00	417	834	10,008.00
Republic.....	1,183	1,183	11,830.00	1,126	1,126	13,512.00
Rice.....	451	902	9,020.00	412	824	9,888.00
Riley.....	988	1,976	18,772.00	612	918	11,016.00
Rooks.....	1,227	1,227	12,270.00	1,079	809	8,899.00
Rush.....	326	326	3,260.00	598	598	7,176.00
Russell.....	432	432	4,320.00	383	383	4,596.00
Saline.....	70	105	997.50	77	96	1,056.00
Scott.....	3,112	1,556	15,560.00	3,293	3,293	36,223.00
Sedgwick.....	594	1,040	11,440.00	79	119	1,428.00
Seward.....	10	8	88.00	40	40	440.00
Shawnee.....	304	608	6,080.00	70	158	1,738.00
Sheridan.....	3,704	1,852	18,520.00	4,603	3,452	37,972.00
Sherman.....	3,249	3,249	35,739.00	3,797	4,746	47,460.00
Smith.....	4,368	2,184	24,024.00	2,469	3,086	37,032.00
Stafford.....	96	168	1,680.00	144	216	2,592.00
Stanton.....						
Stevens.....	61	61	671.00	10	10	110.00
Sumner.....	1,058	1,852	20,372.00	813	1,626	19,512.00
Thomas.....	2,097	1,573	17,303.00	3,083	2,312	23,120.00
Trego.....	3,505	3,505	42,060.00	2,654	2,654	31,848.00
Wabunsee.....	865	1,946	17,514.00	1,141	2,567	28,237.00
Wallace.....	1,899	1,899	22,788.00	1,508	2,262	22,620.00
Washington.....	2,337	3,506	31,554.00	2,203	2,754	33,048.00
Wichita.....	900	450	4,500.00	769	769	7,690.00
Wilson.....	232	464	4,640.00	120	150	1,650.00
Woodson.....	194	339	3,390.00	113	170	2,040.00
Wyandotte.....	31	55	550.00			

SUGAR BEETS.

TABLE showing the number of acres, product and value for the years 1917 and 1918.

COUNTIES.	1917.			1918.		
	Acres.	Tons.	Value.	Acres.	Tons.	Value.
The State.....	10,747	108,699	\$694,754.00	9,494	74,215	\$741,628.00
Allen.....				1	6	\$57.00
Anderson.....						
Atchison.....	1	10	\$55.00			
Barber.....						
Barton.....						
Bourbon.....						
Brown.....						
Butler.....	1	9	49.50	1	6	57.00
Chase.....						
Chautauqua.....				5	30	285.00
Cherokee.....				19	114	1,083.00
Cheyenne.....						
Clark.....	2	20	110.00			
Clay.....						
Cloud.....						
Coffey.....						
Comanche.....						
Cowley.....				1	6	57.00
Crawford.....						
Decatur.....						
Dickinson.....				6	36	342.00
Doniphan.....						
Douglas.....	60	600	3,300.00	2	12	114.00
Edwards.....						
Elk.....						
Ellis.....						
Ellsworth.....						
Finney.....	8,672	86,720	563,680.00	7,064	56,512	565,120.00
Ford.....						
Franklin.....	2	20	110.00			
Geary.....						
Gove.....						
Graham.....				1	6	57.00
Grant.....						
Gray.....	2	20	120.00			
Greeley.....						
Greenwood.....				1	6	57.00
Hamilton.....						
Harper.....						
Harvey.....	1	9	49.50			
Haskell.....						
Hodgeman.....						
Jackson.....						
Jefferson.....						
Jewell.....						
Johnson.....	4			1	6	57.00
Kearny.....	1,419	15,609	93,654.00	1,317	10,536	105,360.00
Kingman.....						
Kiowa.....						
Labette.....	1	10	55.00			
Lane.....						
Leavenworth.....				1	6	57.00
Lincoln.....						
Linn.....						
Logan.....						

SUGAR BEETS—CONCLUDED.

COUNTIES.	1917.			1918.		
	Acres.	Tons.	Value.	Acres.	Tons.	Value.
Lyon.....				20	120	\$1,140.00
Marion.....						
Marshall.....				5	30	285.00
McPherson.....						
Meade.....	1	10	\$55.00			
Miami.....						
Mitchell.....						
Montgomery.....	1	10	55.00			
Morris.....						
Morton.....						
Nemaha.....						
Neosho.....				3	18	171.00
Ness.....						
Norton.....				1	6	57.00
Osage.....				2	12	114.00
Osborne.....						
Ottawa.....						
Pawnee.....	30	420	2,310.00	39	273	2,730.00
Phillips.....				5	30	285.00
Pottawatomie.....						
Pratt.....						
Rawlins.....	4	40	220.00			
Reno.....	3	30	165.00	5	30	285.00
Republic.....						
Rice.....	1	10	55.00			
Riley.....						
Rooks.....						
Rush.....						
Russell.....						
Saline.....						
Scott.....	500	4,750	28,500.00	900	5,850	58,500.00
Sedgwick.....	12	108	594.00	10	60	570.00
Seward.....						
Shawnee.....				1	6	57.00
Sheridan.....						
Sherman.....	11	110	605.00			
Smith.....						
Stafford.....						
Stanton.....						
Stevens.....						
Sumner.....	6	54	297.00	22	132	1,254.00
Thomas.....						
Trego.....						
Wabaunsee.....				2	12	114.00
Wallace.....						
Washington.....	1	10	55.00			
Wichita.....						
Wilson.....	1	10	55.00			
Woodson.....						
Wyandotte.....	11	110	605.00	59	354	3,363.00

SACCHARINE SORGHUM, 1917.

TABLE showing the total acres and value; also, separately, the acres planted for syrup, and its product and value, in 1917.

COUNTIES.	Aggregate.		Syrup.		
	Acres.	Value.	Acres.	Gallons.	Value.
The State.....	794,237	\$10,056,014.91	6,981	422,118	\$295,482.60
Allen.....	1,105	\$20,662.40	102	6,222	\$4,355.40
Anderson.....	1,406	41,018.00	95	5,700	3,990.00
Atchison.....	334	9,735.50	24	1,680	1,176.00
Barber.....	6,828	87,613.32	90		
Barton.....	7,990	135,410.20	39		
Bourbon.....	4,488	198,275.40	1,777	159,930	111,951.00
Brown.....	76	1,678.00	6	420	294.00
Butler.....	5,970	148,724.04	384	23,040	16,128.00
Chase.....	2,088	42,637.50	40	2,400	1,680.00
Chautauqua.....	5,422	88,317.25	55	3,850	2,695.00
Cherokee.....	2,687	64,324.26	103	7,725	5,407.50
Cheyenne.....	13,502	169,868.00			
Clark.....	8,606	97,657.00			
Clay.....	3,940	52,262.00	184	9,200	6,440.00
Cloud.....	6,221	65,628.40	5	200	140.00
Coffey.....	1,869	32,809.51	56	3,360	2,352.00
Comanche.....	7,298	90,441.80			
Cowley.....	5,713	115,000.68	81	4,860	3,402.00
Crawford.....	1,663	30,542.50	65	5,200	3,640.00
Decatur.....	19,903	205,611.00	88		
Dickinson.....	2,740	58,793.20	23	1,150	805.00
Doniphan.....	44	2,106.00	42	2,940	2,058.00
Douglas.....	919	20,016.00	24	1,680	1,176.00
Edwards.....	3,351	35,492.40			
Elk.....	3,254	62,536.00	124	8,060	5,642.00
Ellis.....	24,019	188,217.60			
Fillsworth.....	13,866	232,359.00			
Finney.....	19,032	337,388.50			
Ford.....	16,283	122,144.00	290		
Franklin.....	976	26,510.50	101	6,565	4,595.50
Geary.....	645	15,246.00			
Gove.....	28,934	179,516.00			
Graham.....	18,262	130,840.00	10		
Grant.....	3,965	56,473.30			
Gray.....	9,675	84,146.40	95		
Greeley.....	5,260	52,600.00			
Greenwood.....	7,398	116,289.40	17	1,020	714.00
Hamilton.....	2,854	56,392.50			
Harper.....	1,946	36,042.25	34	680	476.00
Harvey.....	2,744	49,636.70	14	350	245.00
Haskell.....	4,602	37,888.50			
Hodgeman.....	20,741	183,524.04			
Jackson.....	1,621	40,935.20	92	6,440	4,508.00
Jefferson.....	923	26,402.00	268	18,760	13,132.00
Jewell.....	8,413	188,398.00	112	3,360	2,352.00
Johnson.....	330	8,857.00	15	1,050	735.00
Kearny.....	4,331	53,849.50	1		
Kingman.....	9,533	143,168.70	27	270	189.00
Kiowa.....	10,598	147,721.76			
Labette.....	2,653	65,307.00	105	7,350	5,145.00
Lane.....	23,667	241,086.80			
Leavenworth.....	801	26,499.00	300	21,000	14,700.00
Lincoln.....	8,444	88,665.50			
Linn.....	1,515	27,424.50	4	360	252.00
Logan.....	16,615	112,319.20	15		

SACCHARINE SORGHUM, 1917—CONCLUDED.

COUNTIES.	Aggregate.		Syrup.		
	Acres.	Value.	Acres.	Gallons.	Value.
Lyon.....	2,683	\$57,736.50	73	4,745	\$3,321.50
Marion.....	6,660	120,333.50	34	1,700	1,190.00
Marshall.....	2,813	53,931.00	66	4,620	3,234.00
McPherson.....	3,519	58,757.30	23	989	692.30
Meade.....	13,940	108,419.20	10		
Miami.....	913	25,136.50	143	9,295	6,506.50
Mitchell.....	11,053	172,359.40	20	600	420.00
Montgomery.....	1,833	49,053.00	93	6,510	4,557.00
Morris.....	4,138	64,542.66	120	7,200	5,040.00
Morton.....	3,477	36,578.30			
Nemaha.....	1,245	34,690.60	50	3,500	2,450.00
Neosho.....	1,995	66,911.86	341	26,257	18,379.90
Ness.....	23,568	325,920.00	5		
Norton.....	13,712	117,562.00	36		
Osage.....	3,308	67,149.94	59	3,835	2,684.50
Osborne.....	19,825	216,970.56			
Ottawa.....	6,253	86,144.00	26	1,040	728.00
Pawnee.....	11,327	169,113.60	70		
Phillips.....	12,807	113,152.50	1		
Pottawatomie.....	1,717	42,974.60	69	4,830	3,381.00
Pratt.....	7,682	140,779.00	5		
Rawlins.....	12,559	109,193.28			
Reno.....	8,605	137,380.80	63	1,260	882.00
Republic.....	4,689	64,374.50	11	440	308.00
Rice.....	3,928	69,272.80	5	100	70.00
Riley.....	2,099	52,506.00	30	1,800	1,260.00
Rooks.....	12,024	60,438.00	50		
Rush.....	18,119	359,715.00			
Russell.....	16,895	176,471.92			
Saline.....	6,204	108,331.20	3	120	84.00
Scott.....	16,740	92,591.80	101		
Sedgwick.....	3,116	93,619.80			
Seward.....	11,268	169,597.50			
Shawnee.....	1,018	26,072.40	148	10,360	7,252.00
Sheridan.....	21,320	99,560.00	5		
Sherman.....	10,503	83,667.00			
Smith.....	8,030	92,767.80	5	50	35.00
Stafford.....	10,521	159,716.40	7		
Stanton.....	5,412	76,247.46	1		
Stevens.....	10,840	140,919.64	50		
Sumner.....	3,987	84,747.80	3	120	84.00
Thomas.....	25,044	280,383.60			
Trego.....	15,370	77,852.50	35		
Wabaunsee.....	2,644	65,986.30	41	2,665	1,865.50
Wallace.....	3,718	35,574.08	30		
Washington.....	3,814	75,729.00	22	1,320	924.00
Wichita.....	8,306	62,511.70			
Wilson.....	2,569	78,331.00	69	4,830	3,381.00
Woodson.....	1,413	37,023.40	146	8,760	6,132.00
Wyandotte.....	51	1,202.00	5	350	245.00

SACCHARINE SORGHUM, 1917.

TABLE showing the acres, product and value of seed and hay for the year 1917.

COUNTIES.	Seed.			Forage and hay.		
	Acres.	Bushels.	Value.	Acres.	Tons.	Value.
The State.....	80,920	598,235	\$966,264.31	706,336	1,164,976	\$8,794,268.00
Allen.....	38	418	\$627.00	965	3,136	\$15,680.00
Anderson.....	160	3,200	4,800.00	1,151	4,604	32,228.00
Atenison.....	45	405	607.50	265	994	7,952.00
Barber.....	1,086	11,946	16,963.32	5,652	14,130	70,650.00
Barton.....	957	7,656	13,015.20	6,994	17,485	122,395.00
Bourbon.....	114	2,508	4,514.40	2,597	9,090	81,810.00
Brown.....	2	16	24.00	68	170	1,360.00
Butler.....	2,358	42,444	70,457.04	3,228	8,877	62,139.00
Chase.....	465	8,835	13,252.50	1,583	5,541	27,705.00
Chautauqua.....	3,183	28,647	50,132.25	2,184	7,098	35,490.00
Cherokee.....	202	2,328	4,722.76	2,382	7,742	54,194.00
Cheyenne.....	272	2,992	4,488.00	13,230	16,538	165,380.00
Clark.....	634	.....	.....	7,972	13,951	97,657.00
Clay.....	250	2,500	3,750.00	3,506	7,012	42,072.00
Cloud.....	302	2,114	3,382.40	5,914	10,351	62,106.00
Coffey.....	411	4,521	5,922.51	1,402	4,907	24,535.00
Comanche.....	291	2,037	2,851.80	7,007	17,518	87,590.00
Cowley.....	1,801	25,214	40,846.68	3,831	10,536	73,752.00
Crawford.....	89	1,335	2,002.50	1,509	4,150	24,900.00
Decatur.....	1,631	9,786	14,679.00	18,184	27,276	190,932.00
Dickinson.....	388	5,044	9,079.20	2,329	6,987	48,909.00
Doniphan.....	.....	.....	.....	2	6	48.00
Douglas.....	28	420	630.00	867	3,035	18,210.00
Edwards.....	31	372	632.40	3,320	5,810	34,860.00
Elk.....	1,268	12,680	19,654.00	1,862	4,655	37,240.00
Ellis.....	631	3,786	6,057.60	24,288	18,216	132,160.00
Ellsworth.....	1,144	5,720	9,724.00	12,722	31,805	222,635.00
Finney.....	2,075	20,750	32,162.50	16,957	33,914	305,226.00
Ford.....	725	.....	.....	15,268	15,268	122,144.00
Franklin.....	122	2,196	3,843.00	753	3,012	18,072.00
Geary.....	191	2,292	3,438.00	454	1,476	11,808.00
Gove.....	8,332	16,664	24,996.00	20,602	15,452	154,520.00
Graham.....	806	.....	.....	17,446	13,084	130,840.00
Grant.....	285	3,135	4,953.30	3,680	6,440	51,520.00
Gray.....	480	1,440	2,246.40	9,100	9,100	81,900.00
Greeley.....	.....	.....	.....	5,260	5,260	52,600.00
Greenwood.....	1,704	21,528	38,750.40	5,587	15,365	76,825.00
Hamilton.....	55	275	412.50	2,799	5,598	55,980.00
Harper.....	495	7,425	10,766.25	1,417	4,960	24,800.00
Harvey.....	109	2,071	3,520.70	2,621	6,553	45,871.00
Haskell.....	825	4,950	7,672.50	3,777	3,777	30,216.00
Hodgeman.....	1,248	4,992	8,087.04	19,493	19,493	175,437.00
Jackson.....	28	252	403.20	1,501	6,004	36,024.00
Jefferson.....	70	560	840.00	585	2,486	12,430.00
Jewell.....	486	5,832	10,206.00	7,815	17,534	175,840.00
Johnson.....	137	2,740	4,384.00	178	534	3,738.00
Kearny.....	139	973	1,459.50	4,191	5,239	52,390.00
Kingman.....	1,289	11,601	19,721.70	8,217	20,543	123,258.00
Kiowa.....	631	5,048	8,177.76	9,967	17,443	139,544.00
Labette.....	165	1,980	2,970.00	2,383	7,149	57,192.00
Lane.....	4,271	25,626	47,126.80	19,396	19,396	193,960.00
Leavenworth.....	25	250	375.00	476	1,428	11,424.00
Lincoln.....	279	1,953	2,929.50	8,165	12,248	85,736.00
Linn.....	365	4,745	7,117.50	1,146	2,865	20,055.00
Logan.....	2,831	5,662	9,059.20	13,769	10,326	103,260.00

SACCHARINE SORGHUM, 1917—CONCLUDED.

COUNTIES.	Seed.			Forage and hay.		
	Acres.	Busbels.	Value.	Acres.	Tons.	Value.
Lyon.....	886	13,290	\$19,935.00	1,724	6,896	\$34,480.00
Marion.....	671	2,013	3,019.50	5,955	19,354	116,124.00
Marshall.....	139	2,085	3,753.00	2,608	7,824	46,944.00
McPherson.....	126	1,638	2,457.00	3,370	9,268	55,608.00
Meade.....	944	2,832	4,531.20	12,986	12,986	103,888.00
Miami.....	50	900	1,350.00	720	2,160	17,280.00
Mitchell.....	476	3,332	5,664.40	10,557	18,475	166,275.00
Montgomery.....	110	1,320	2,112.00	1,630	5,298	42,384.00
Morris.....	1,827	16,443	26,637.66	2,191	6,573	32,865.00
Morton.....	26	234	339.30	3,451	5,177	36,239.00
Nemaha.....	67	469	656.60	1,128	3,948	31,584.00
Neosho.....	154	3,234	4,656.96	1,500	4,875	43,875.00
Ness.....	1,240	7,440	13,392.00	22,323	39,066	312,528.00
Norton.....	1,004	2,008	3,514.00	12,672	12,672	114,048.00
Osage.....	826	9,912	13,579.44	2,423	8,481	50,886.00
Osborne.....	876	7,008	11,002.56	18,949	29,424	205,968.00
Ottawa.....	900	9,000	13,500.00	5,327	11,986	71,916.00
Pawnee.....	426	4,260	6,645.60	10,831	27,078	162,468.00
Phillips.....	467	1,401	2,101.50	12,339	12,339	111,051.00
Pottawatomie.....	271	3,252	5,853.60	1,377	4,820	33,740.00
Pratt.....	863	12,082	18,123.00	6,814	15,332	122,656.00
Rawlins.....	204	816	1,085.28	12,355	15,444	108,108.00
Reno.....	951	13,314	22,633.80	7,591	22,773	113,865.00
Republic.....	406	3,654	6,394.50	4,272	6,408	57,672.00
Rice.....	448	4,032	6,652.80	3,475	10,425	62,550.00
Riley.....	130	2,080	3,744.00	1,939	6,786	47,502.00
Rooks.....	460			11,514	8,634	60,438.00
Rush.....	1,066	10,660	18,655.00	17,053	34,106	341,060.00
Russell.....	452	2,712	3,823.92	16,443	24,664	172,648.00
Saline.....	88	704	1,267.20	6,113	21,396	106,980.00
Scott.....	5,887	11,774	20,015.80	10,752	8,064	72,576.00
Sedgwick.....	369	4,428	7,084.80	2,747	9,615	86,535.00
Seward.....	1,501	10,507	15,760.50	9,767	17,093	153,837.00
Shawnee.....	134	2,278	4,100.40	736	2,944	14,720.00
Sheridan.....	1,404			19,911	9,956	99,560.00
Sherman.....	102	306	459.00	10,401	10,401	83,208.00
Smith.....	744	2,976	5,356.80	7,281	10,922	87,376.00
Stafford.....	418	4,598	8,276.40	10,096	25,240	151,440.00
Stanton.....	2,243	20,187	31,895.46	3,168	6,336	44,352.00
Stevens.....	1,908	20,988	32,111.64	8,882	15,544	108,808.00
Sumner.....	733	7,330	10,701.80	3,251	10,566	73,962.00
Thomas.....	174	348	591.60	24,870	31,088	279,792.00
Trego.....	471	2,355	3,532.50	14,864	7,432	74,320.00
Wabauunsee.....	442	5,304	9,016.80	2,161	9,184	55,104.00
Wallace.....	371	1,484	2,404.08	3,317	3,317	33,170.00
Washington.....	286	4,290	6,435.00	3,506	11,395	68,370.00
Wichita.....	357	1,785	2,891.70	7,949	5,962	59,620.00
Wilson.....	404	5,252	7,878.00	2,096	8,384	67,072.00
Woodson.....	376	7,520	12,182.40	891	3,119	18,714.00
Wyandotte.....	3	36	54.00	43	129	903.00

SACCHARINE SORGHUM, 1918.

TABLE showing the total acres, and value; also, separately, the acres planted for syrup and its product and value, in 1918.

COUNTIES.	Aggregate.		Syrup.		
	Acres.	Value.	Acres.	Gallons.	Value.
The State.....	873,829	\$14,023,265.06	10,134	421,310	\$463,441.00
Allen.....	1,857	\$53,140.80	354	19,470	\$21,417.00
Anderson.....	1,921	48,840.50	181	9,955	10,950.50
Atchison.....	247	7,907.25	24	1,680	1,848.00
Barber.....	12,630	263,020.50	78	.....	.....
Barton.....	6,191	105,517.60	16	400	440.00
Bourbon.....	3,546	125,729.40	894	53,640	59,004.00
Brown.....	147	5,268.50	29	1,885	2,073.50
Butler.....	9,048	188,520.50	322	12,880	14,168.00
Chase.....	3,086	62,634.00	44	2,200	2,420.00
Chautauqua.....	7,567	148,517.60	210	7,350	8,085.00
Cherokee.....	2,205	50,734.30	185	9,250	10,175.00
Cheyenne.....	11,653	213,858.60	55	.....	.....
Clark.....	11,362	165,087.00	120	.....	.....
Clay.....	4,756	100,523.50	35	1,750	1,925.00
Cloud.....	7,645	70,523.00	43	1,720	1,892.00
Coffey.....	3,365	85,618.50	112	6,160	6,776.00
Comanche.....	8,162	99,032.00	79	.....	.....
Cowley.....	8,917	211,954.50	223	6,690	7,359.00
Crawford.....	2,000	55,151.00	187	9,350	10,285.00
Decatur.....	26,846	422,637.75	213	.....	.....
Dickinson.....	3,005	50,464.50	23	1,150	1,265.00
Doniphan.....	67	2,465.00	13	910	1,001.00
Douglas.....	1,100	33,094.10	135	8,775	9,652.50
Edwards.....	6,304	76,882.50	20	.....	.....
Elk.....	5,052	94,226.96	203	7,105	7,815.50
Ellis.....	16,824	172,074.60	10	.....	.....
Ellsworth.....	11,603	176,849.00	22	550	605.00
Finney.....	20,290	382,187.90	11	220	242.00
Ford.....	23,165	193,447.32	15	.....	.....
Franklin.....	960	32,576.50	165	9,900	10,890.00
Geary.....	904	20,955.65	35	2,100	2,310.00
Gove.....	42,729	724,114.00	161	.....	.....
Graham.....	13,663	152,679.00	10	.....	.....
Grant.....	6,499	113,588.25	20	.....	.....
Gray.....	14,127	149,757.50	20	400	440.00
Greeley.....	5,027	96,863.80	.....	.....	.....
Greenwood.....	8,169	141,937.24	68	3,060	3,366.00
Hamilton.....	3,743	62,929.50	3	45	49.50
Harper.....	4,859	101,153.00	76	1,520	1,672.00
Harvey.....	2,624	61,241.70	36	1,440	1,584.00
Haskell.....	12,323	172,425.60	.....	.....	.....
Hodgeman.....	22,405	207,135.80	.....	.....	.....
Jackson.....	1,294	35,342.25	75	5,250	5,775.00
Jefferson.....	764	39,532.50	346	25,950	28,545.00
Jewell.....	8,948	169,387.80	133	3,990	4,389.00
Johnson.....	480	14,225.90	66	4,290	4,719.00
Kearny.....	5,983	100,016.00	92	1,380	1,518.00
Kingman.....	13,866	230,022.00	81	1,620	1,782.00
Kiowa.....	10,318	197,456.00	.....	.....	.....
Labette.....	2,797	69,084.80	186	9,300	10,230.00
Lane.....	41,017	546,975.65	.....	.....	.....
Leavenworth.....	754	34,848.75	324	22,680	24,948.00
Lincoln.....	4,201	52,505.40	21	630	693.00
Linn.....	1,687	47,389.00	357	21,420	23,562.00
Logan.....	17,599	267,056.10	228	.....	.....

SACCHARINE SORGHUM, 1918—CONCLUDED.

COUNTIES.	Aggregate.		Syrup.		
	Acres.	Value.	Acres.	Gallons.	Value.
Lyon.....	2,793	\$66,269.00	119	7,140	\$7,854.00
Marion.....	7,461	152,893.00	106	5,300	5,830.00
Marshall.....	2,559	47,748.00	53	3,180	3,493.00
McPherson.....	2,623	46,149.60	25	1,250	1,375.00
Meade.....	20,420	281,337.50	16		
Miami.....	560	18,574.50	141	8,460	9,306.00
Mitchell.....	8,654	110,758.00	94	2,820	3,102.00
Montgomery.....	3,247	65,179.00	287	11,480	12,628.00
Morris.....	5,386	133,689.96	46	2,760	3,036.00
Morton.....	4,324	108,100.00			
Nemaha.....	1,226	31,066.80	72	4,680	5,148.00
Neosho.....	2,623	77,431.32	348	19,140	21,054.00
Ness.....	16,426	167,494.75	157		
Norton.....	19,666	274,387.50	68		
Osage.....	3,314	70,490.75	153	9,945	10,939.50
Osborne.....	15,061	244,291.18	62	1,240	1,364.00
Ottawa.....	7,804	95,765.20	44	1,760	1,936.00
Pawnee.....	12,463	210,128.48	95		
Phillips.....	13,310	253,592.00	85		
Pottawatomie.....	1,725	45,227.80	124	9,300	10,230.00
Pratt.....	5,761	104,895.00	46		
Rawlins.....	16,763	227,677.80			
Reno.....	8,526	196,498.00	142	3,550	3,905.00
Republic.....	4,779	64,150.00	95	3,800	4,180.00
Rice.....	3,640	58,473.20	30	900	990.00
Riley.....	2,038	36,963.60	25	1,500	1,650.00
Rooks.....	17,475	195,093.54	99		
Rush.....	7,733	81,249.50	5		
Russell.....	14,230	145,707.36	8		
Saline.....	4,172	61,111.00	10	400	440.00
Scott.....	26,617	333,320.40	24	720	792.00
Sedgwick.....	2,987	73,161.50	73	2,190	2,409.00
Seward.....	14,383	323,700.00			
Shawnee.....	1,006	32,400.95	140	11,200	12,320.00
Sheridan.....	14,741	187,465.90	170		
Sherman.....	11,205	204,450.00	5		
Smith.....	7,500	127,273.68	24	480	528.00
Stafford.....	5,922	99,803.60	22	440	484.00
Stanton.....	4,835	88,488.00	6		
Stevens.....	14,208	329,030.60	15		
Sumner.....	6,202	127,368.00	74	1,480	1,628.00
Thomas.....	23,990	272,138.76			
Trego.....	9,522	144,130.66	50		
Wabaunsee.....	2,566	62,557.50	51	3,825	4,207.50
Wallace.....	5,547	110,768.40	52		
Washington.....	4,333	68,236.00	70	3,500	3,850.00
Wichita.....	8,049	129,965.40	1	20	22.00
Wilson.....	3,081	91,010.50	277	12,465	13,711.50
Woodson.....	1,945	37,825.00	165	8,250	9,075.00
Wyandotte.....	27	668.50	1	70	77.00

SACCHARINE SORGHUM, 1918.

TABLE showing the acres, product and value of seed and hay for the year 1918.

COUNTIES.	Seed.			Forage and hay.		
	Acres.	Bushels.	Value.	Acres.	Tons.	Value.
The State.....	231,622	2,052,361	\$3,746,295.56	632,073	1,116,863	\$9,813,528.50
Allen.....	268	3,216	\$5,788.80	1,235	3,705	\$25,935.00
Anderson.....	281	2,810	5,058.00	1,459	3,648	32,832.00
Atchison.....	51	765	1,415.25	172	516	4,644.00
Barber.....	3,009	33,099	66,198.00	9,543	26,243	196,822.50
Barton.....	1,026	9,234	17,544.60	5,149	10,298	87,533.00
Bourbon.....	448	4,928	8,870.40	2,204	7,714	57,855.00
Brown.....	12	180	333.00	106	318	2,862.00
Butler.....	4,700	47,000	89,300.00	4,026	13,085	85,052.50
Chase.....	947	11,364	19,887.00	2,095	5,761	40,327.00
Chautauqua.....	5,243	47,187	84,936.60	2,114	7,928	55,496.00
Cherokee.....	177	1,947	3,699.30	1,843	3,686	36,860.00
Cheyenne.....	1,213	14,556	26,923.60	10,385	20,770	186,930.00
Clark.....	2,664	26,640	49,284.00	8,573	12,867	115,803.00
Clay.....	686	6,174	12,348.00	4,035	9,079	86,250.50
Cloud.....	1,475	8,850	17,700.00	6,127	5,659	50,931.00
Coffey.....	1,198	14,376	25,158.00	2,055	5,651	53,684.50
Comanche.....	508	4,064	8,128.00	7,575	11,363	90,904.00
Cowley.....	4,415	48,565	92,273.50	4,279	16,046	112,322.00
Crawford.....	160	2,080	3,952.00	1,653	4,546	40,914.00
Decatur.....	3,515	31,635	58,524.75	23,118	40,457	364,113.00
Dickinson.....	595	5,950	11,007.50	2,387	4,774	38,192.00
Doniphan.....	8	120	222.00	46	138	1,242.00
Douglas.....	84	1,092	1,965.60	881	3,304	21,476.00
Edwards.....	555	2,775	5,272.50	5,729	7,161	71,610.00
Elk.....	2,463	22,167	41,673.96	2,386	5,965	44,737.50
Ellis.....	3,078	9,234	17,544.60	13,736	17,170	154,530.00
Ellsworth.....	2,822	28,220	53,618.00	8,759	17,518	122,626.00
Finney.....	8,176	106,288	191,318.40	12,103	18,155	190,627.50
Ford.....	6,002	12,004	21,967.32	17,148	17,148	171,480.00
Franklin.....	110	1,430	2,502.50	685	2,398	19,184.00
Geary.....	501	4,509	8,341.65	368	1,288	10,304.00
Gove.....	16,020	144,180	259,524.00	26,548	46,459	464,590.00
Graham.....	1,220	7,320	12,810.00	12,433	15,541	139,869.00
Grant.....	3,297	36,267	63,467.25	3,182	5,569	50,121.00
Gray.....	8,689	43,445	78,201.00	5,418	6,773	71,116.50
Greeley.....	166	1,826	3,286.80	4,861	8,507	93,577.00
Greenwood.....	2,162	19,458	34,635.24	5,939	14,848	103,936.00
Hamilton.....	120	1,800	3,150.00	3,620	5,430	59,730.00
Harper.....	962	9,620	19,240.00	3,821	11,463	80,241.00
Harvey.....	507	4,563	8,669.70	2,081	7,284	50,988.00
Haskell.....	6,734	53,872	96,969.60	5,589	8,384	75,456.00
Hodgeman.....	3,677	11,031	19,855.80	18,728	18,728	187,280.00
Jackson.....	83	1,245	2,303.25	1,136	3,408	27,264.00
Jefferson.....	47	705	1,339.50	371	1,206	9,618.00
Jewell.....	1,172	15,236	27,424.80	7,613	15,286	137,574.00
Johnson.....	131	1,703	3,065.40	283	991	6,441.50
Kearny.....	1,688	20,256	35,448.00	4,203	6,305	63,050.00
Kingman.....	4,293	42,930	85,860.00	9,492	18,984	142,380.00
Kiowa.....	2,226	17,808	35,616.00	8,092	16,184	161,840.00
Labette.....	341	4,092	7,774.80	2,270	5,108	51,080.00
Lane.....	21,267	148,869	275,407.65	19,750	24,688	271,568.00
Leavenworth.....	23	845	638.25	407	1,425	9,262.50
Lincoln.....	1,617	12,936	24,578.40	2,563	3,204	27,234.00
Linn.....	226	2,260	3,955.00	1,104	2,208	19,872.00
Logan.....	3,517	38,687	69,636.60	13,854	20,781	197,419.50

SACCHARINE SORGHUM, 1918—CONCLUDED.

COUNTIES.	Seed.			Forage and hay.		
	Acres.	Bushels.	Value.	Acres.	Tons.	Value.
Lyon.....	1,292	16,796	\$29,393.00	1,382	4,146	\$29,022.00
Marion.....	1,056	8,448	14,784.00	6,299	18,897	132,279.00
Marshall.....	156	1,560	3,120.00	2,350	4,113	41,130.00
McPherson.....	257	2,056	3,803.60	2,341	5,853	40,971.00
Meade.....	5,257	52,570	91,997.50	15,147	18,934	189,340.00
Miami.....	110	1,100	1,925.00	309	773	7,343.50
Mitchell.....	1,234	9,872	19,744.00	7,326	10,989	87,912.00
Montgomery.....	405	3,645	6,561.00	2,555	5,110	45,990.00
Morris.....	3,547	42,564	80,445.96	1,793	6,276	50,208.00
Morton.....				4,324	10,810	108,100.00
Nemaha.....	154	1,848	3,418.80	1,000	2,250	22,500.00
Neosho.....	317	4,121	7,912.32	1,958	5,385	48,465.00
Ness.....	4,025	12,075	22,097.25	12,244	15,305	145,397.50
Norton.....	2,960	20,720	37,296.00	16,638	24,957	237,091.50
Osage.....	565	6,215	10,876.25	2,596	6,490	48,675.00
Osborne.....	3,546	31,914	59,679.18	11,453	22,906	183,248.00
Ottawa.....	1,448	8,688	16,507.20	6,312	11,046	77,322.00
Pawnee.....	1,594	14,346	26,970.48	10,774	21,548	183,158.00
Phillips.....	1,818	14,544	25,452.00	11,407	22,814	228,140.00
Pottawatomie.....	202	2,222	4,221.80	1,399	3,847	30,776.00
Pratt.....	1,230	9,840	19,680.00	4,485	8,970	85,215.00
Rawlins.....	1,056	8,448	15,628.80	15,707	23,561	212,049.00
Reno.....	1,487	17,844	35,688.00	6,897	22,415	156,905.00
Republic.....	939	9,390	17,841.00	3,745	4,681	42,129.00
Rice.....	789	9,468	17,989.20	2,821	5,642	39,494.00
Riley.....	328	2,624	4,985.60	1,685	3,791	30,328.00
Rooks.....	1,423	8,538	15,624.54	15,953	19,941	179,469.00
Rush.....	763	3,815	7,248.50	6,965	8,706	74,001.00
Russell.....	2,124	12,744	24,723.36	12,098	15,123	120,984.00
Saline.....	534	5,340	9,879.00	3,628	7,256	50,792.00
Scott.....	11,228	67,368	121,262.40	15,365	19,206	211,266.00
Sedgwick.....	919	9,190	18,380.00	1,995	6,983	52,372.50
Seward.....	8,970	107,640	188,370.00	5,413	13,533	135,330.00
Shawnee.....	99	1,485	2,628.45	767	2,685	17,452.50
Sheridan.....	5,716	45,728	82,310.40	8,855	11,069	105,155.50
Sherman.....	250	3,000	5,550.00	11,050	22,100	198,900.00
Smith.....	1,461	17,532	30,505.68	6,015	12,030	96,240.00
Stafford.....	1,004	11,044	20,983.60	4,896	9,792	78,336.00
Stanton.....	2,367	28,404	49,707.00	2,462	4,309	38,781.00
Stevens.....	11,887	166,418	282,910.60	2,306	5,765	46,120.00
Sumner.....	1,043	10,430	20,860.00	5,085	13,984	104,880.00
Thomas.....	594	4,752	8,933.76	23,396	29,245	263,205.00
Trego.....	3,317	19,902	36,420.66	6,155	10,771	107,710.00
Wabaunsee.....	990	9,900	18,315.00	1,525	5,338	40,035.00
Wallace.....	1,647	23,058	41,504.40	3,848	7,696	69,264.00
Washington.....	436	3,488	6,976.00	3,827	5,741	57,410.00
Wichita.....	1,724	18,964	35,083.40	6,324	9,486	94,860.00
Wilson.....	544	5,440	10,064.00	2,260	7,910	67,235.00
Woodson.....	235	2,350	4,418.00	1,545	3,476	24,332.00
Wyandotte.....				26	91	591.50

MILO, 1917.

TABLE showing the total acres and value, and also the acres, tons and value of hay, separately, in 1917.

COUNTIES.	Aggregate.		Hay.		
	Acres.	Value.	Acres.	Tons.	Value.
The State.....	393,997	\$6,464,405.98	5,956	7,596	\$50,111.50
Allen.....	978	\$30,611.92	31	101	\$555.50
Anderson.....	163	6,045.00	5	20	120.00
Atchison.....	155	4,152.00			
Barber.....	2,331	46,084.12	59	147	735.00
Barton.....	2,727	44,783.50	189	284	2,272.00
Bourbon.....	143	4,461.60			
Brown.....	1	21.00	1	3	21.00
Butler.....	343	8,624.00	70	140	980.00
Chase.....	161	4,828.50			
Chautauqua.....	261	5,256.00	50	150	825.00
Cherokee.....	249	7,287.00	62	186	1,116.00
Cheyenne.....	85	934.00	19	24	144.00
Clark.....	11,683	95,788.60	10	10	70.00
Clay.....	53	769.00	12	30	195.00
Cloud.....	46	706.00	24	48	288.00
Coffey.....	614	14,359.25	25	62	372.00
Comanche.....	6,943	160,637.25	50	75	375.00
Cowley.....	119	3,568.50			
Crawford.....	92	3,150.00	9	27	162.00
Decatur.....	3,502	46,370.50	151	189	1,134.00
Dickinson.....	73	1,823.00	15	38	228.00
Doniphan.....	3	63.00	3	9	63.00
Douglas.....	25	873.00			
Edwards.....	1,797	35,940.00			
Elk.....	792	15,791.25	3	9	49.50
Ellis.....	4,753	53,342.00	25	19	152.00
Ellsworth.....	1,237	24,725.00	4	10	65.00
Finney.....	24,527	521,667.60	45	34	204.00
Ford.....	9,906	116,043.70	197	197	1,477.50
Franklin.....	152	6,498.00			
Geary.....	62	1,572.00	19	47	305.50
Gove.....	10,834	27,020.00	25		
Graham.....	5,154	6,602.00	58	29	232.00
Grant.....	8,208	185,993.28			
Gray.....	17,776	234,151.20	65	49	367.50
Greeley.....	1,534	17,977.80	168	168	1,176.00
Greenwood.....	170	3,947.68	12	27	162.00
Hamilton.....	3,835	113,695.00	253	379	2,653.00
Harper.....	1,522	36,962.75	115	287	1,435.00
Harvey.....	15	648.00	3	8	192.00
Haskell.....	13,214	209,739.20	277	208	1,456.00
Hodgeman.....	5,416	75,369.00	70	70	525.00
Jackson.....	74	1,878.00	32	96	576.00
Jefferson.....	127	4,191.00			
Jewell.....	913	9,291.60	37	74	444.00
Johnson.....	62	1,956.00	6	18	108.00
Kearny.....	7,066	114,286.20	25	37	222.00
Kingman.....	284	6,659.20	30	60	360.00
Kiowa.....	7,490	123,811.68	87	174	1,218.00
Labette.....	158	4,777.00	3	8	52.00
Lane.....	13,767	180,347.70			
Leavenworth.....	101	2,684.60			
Lincoln.....	174	243.60			
Linn.....	122	3,786.00	44	176	1,056.00
Logan.....	4,876	5,905.00	150		

MILO, 1917—CONCLUDED.

COUNTIES.	Aggregate.		Hay.		
	Acres.	Val	Acres.	Tons.	Value.
Lyon.....	529	\$19,121.00	12	42	\$252.00
Marion.....	385	9,191.00	8	22	143.00
Marshall.....	39	1,134.50	8	16	96.00
McPherson.....	578	20,715.00	35	96	624.00
Meade.....	30,426	410,065.30	365	365	2,737.50
Miami.....	32	1,080.00			
Mitchell.....	64	262.80	2	3	21.00
Montgomery.....	112	2,783.20			
Morris.....	150	4,410.00			
Morton.....	14,513	291,130.78			
Nemaha.....	8	232.00			
Neosho.....	422	10,921.64	40	100	600.00
Ness.....	13,853	218,074.07	124	124	744.00
Norton.....	1,643	4,926.00	125	62	372.00
Osage.....	254	7,318.50	16	40	240.00
Osborne.....	1,553	8,149.00	35	26	182.00
Ottawa.....	105	2,220.00	5	10	70.00
Pawnee.....	12,251	289,069.92	115	172	1,204.00
Phillips.....	1,671	8,374.00	83	62	434.00
Pottawatomie.....	74	2,034.60	6	18	117.00
Pratt.....	2,908	89,736.64	84	168	1,176.00
Rawlins.....	4,283	40,821.60	142	178	1,068.00
Reno.....	1,575	44,604.00	69	155	930.00
Republic.....	25	247.00	13	26	182.00
Rice.....	359	7,050.00	106	212	1,484.00
Riley.....	23	533.00	8	24	156.00
Rooks.....	428				
Rush.....	6,634	120,688.00	40	50	350.00
Russell.....	104	450.00	49	25	162.50
Saline.....	105	3,946.50	18	45	292.50
Scott.....	7,888	56,570.06	305	152	1,064.00
Sedgwick.....	607	16,345.00	5	14	91.00
Seward.....	38,663	832,314.65	60	60	420.00
Shawnee.....	28	1,204.00			
Sheridan.....	3,561	4,672.00	297	74	592.00
Sherman.....	233	715.00	90	45	360.00
Smith.....	154	1,158.40	20	20	140.00
Stafford.....	2,089	61,495.50	58	87	565.50
Stanton.....	5,564	138,654.88			
Stevens.....	33,446	895,014.96			
Sumner.....	347	9,741.60	99	272	1,632.00
Thomas.....	17,130	43,140.00	210	105	840.00
Trego.....	6,013	32,008.22	96		
Wabaupee.....	76	1,989.00	5	12	72.00
Wallace.....	992	9,367.50	275	275	2,200.00
Washington.....	150	4,970.00	10	20	140.00
Wichita.....	2,763	25,479.78	185	138	966.00
Wilson.....	1,288	35,647.20	134	402	2,412.00
Woodson.....	1,027	35,805.20	61	152	836.00
Wyandotte.....	4	123.20			

MILO FOR GRAIN (INCLUDING STOVER), 1917.

TABLE showing the acres, bushels and value of grain, and the tons and value of stover, in 1917.

COUNTIES.	Grain.			Stover.	
	Acres.	Bushels.	Value.	Tons.	Value.
The State.....	388,041	3,327,329	\$4,753,391.48	355,710	\$1,660,903.00
Allen.....	947	15,152	\$18,333.92	2,605	\$11,722.50
Anderson.....	158	2,528	3,160.00	553	2,765.00
Atchison.....	155	1,860	2,604.00	387	1,548.00
Barber.....	2,272	27,264	36,261.12	2,272	9,088.00
Barton.....	2,538	12,690	17,131.50	5,076	25,380.00
Bourbon.....	143	2,288	2,745.60	429	1,716.00
Brown.....					
Butler.....	273	3,276	4,914.00	546	2,730.00
Chase.....	161	2,415	3,139.50	563	1,689.00
Chautauqua.....	211	2,532	3,165.00	422	1,266.00
Cherokee.....	187	3,740	4,488.00	561	1,683.00
Cheyenne.....	66	330	462.00	82	328.00
Clark.....	11,673	35,019	49,026.60	11,673	46,692.00
Clay.....	41	328	328.00	82	246.00
Cloud.....	22	220	286.00	33	132.00
Coffey.....	589	7,657	9,571.25	736	4,416.00
Comanche.....	6,893	103,395	139,583.25	6,893	20,679.00
Cowley.....	119	2,142	2,677.50	297	891.00
Crawford.....	83	1,660	1,992.00	249	996.00
Decatur.....	3,351	20,106	25,132.50	5,026	20,104.00
Dickinson.....	58	928	1,160.00	145	435.00
Doniphan.....					
Douglas.....	25	375	525.00	87	348.00
Edwards.....	1,797	17,970	26,955.00	1,797	8,985.00
Elk.....	789	11,835	14,793.75	237	948.00
Ellis.....	4,728	23,640	35,460.00	3,546	17,730.00
Ellsworth.....	1,233	7,398	11,097.00	2,466	13,563.00
Finney.....	24,482	293,784	411,297.60	18,361	110,166.00
Ford.....	9,709	38,836	66,021.20	9,709	48,545.00
Franklin.....	152	2,280	3,306.00	532	3,192.00
Geary.....	43	645	838.50	107	428.00
Gove.....	10,809			5,404	27,020.00
Graham.....	5,096			1,274	6,370.00
Grant.....	8,203	98,496	165,473.28	4,104	20,520.00
Gray.....	17,711	106,266	154,085.70	13,283	79,698.00
Greeley.....	1,366	9,562	13,886.80	683	3,415.00
Greenwood.....	158	1,896	2,521.68	316	1,264.00
Hamilton.....	3,582	53,730	91,341.00	3,582	19,701.00
Harper.....	1,407	18,291	22,863.75	3,165	12,664.00
Harvey.....	12	240	336.00	30	120.00
Haskell.....	12,937	103,496	175,943.20	6,468	32,340.00
Hodgeman.....	5,346	32,076	48,114.00	5,346	26,730.00
Jackson.....	42	630	882.00	105	420.00
Jefferson.....	127	1,905	2,667.00	381	1,524.00
Jewell.....	876	1,752	2,277.60	1,314	6,570.00
Johnson.....	56	840	1,176.00	168	672.00
Kearny.....	7,041	56,328	78,859.20	7,041	35,205.00
Kingman.....	254	3,048	4,267.20	508	2,032.00
Kiowa.....	7,403	66,627	89,280.18	7,403	33,313.50
Labette.....	155	2,325	2,790.00	387	1,935.00
Lane.....	13,767	68,835	111,512.70	13,767	68,835.00
Leavenworth.....	101	909	1,272.60	353	1,412.00
Lincoln.....	174	174	243.60		
Linn.....	78	1,248	1,560.00	234	1,170.00
Logan.....	4,726			1,181	5,905.00

MILO FOR GRAIN (INCLUDING STOVER), 1917—CONCLUDED.

COUNTIES.	Grain.			Stover.	
	Acres.	Bushels.	Value.	Tons.	Value.
Lyon.....	517	10,340	\$13,442.00	1,809	\$5,427.00
Marion.....	377	3,770	5,655.00	1,131	3,393.00
Marshall.....	31	527	790.50	62	248.00
McPherson.....	543	10,860	15,204.00	1,629	4,887.00
Meade.....	30,061	210,427	294,597.80	22,546	112,730.00
Miami.....	32	480	600.00	96	480.00
Mitchell.....	62	62	86.80	31	155.00
Montgomery.....	112	1,456	2,111.20	224	672.00
Morris.....	150	2,700	3,510.00	300	900.00
Morton.....	14,513	159,643	233,078.78	14,513	58,052.00
Nemaha.....	8	120	168.00	16	64.00
Neosho.....	382	4,584	5,546.64	955	4,775.00
Ness.....	13,729	96,103	162,414.07	13,729	54,916.00
Norton.....	1,518	3,036	4,554.00		
Osage.....	238	3,570	4,462.50	654	2,616.00
Osborne.....	1,518	1,518	2,277.00	1,138	5,690.00
Ottawa.....	100	1,000	1,400.00	150	750.00
Pawnee.....	12,136	157,768	227,185.92	15,170	60,680.00
Phillips.....	1,588	1,588	1,935.00	1,191	5,955.00
Pottawatomie.....	68	884	1,237.60	170	680.00
Pratt.....	2,824	48,008	63,850.64	4,942	24,710.00
Rawlins.....	4,141	16,564	23,189.60	4,141	16,564.00
Reno.....	1,506	22,590	31,626.00	3,012	12,048.00
Republic.....	12			13	65.00
Rice.....	253	2,530	3,542.00	506	2,024.00
Riley.....	15	180	225.00	38	152.00
Rooks.....	428				
Rush.....	6,594	52,752	79,128.00	8,242	41,210.00
Russell.....	55	55	82.50	41	205.00
Saline.....	87	1,740	2,610.00	261	1,044.00
Scott.....	7,583	15,166	21,384.06	5,687	34,122.00
Sedgwick.....	602	7,826	11,739.00	1,505	4,515.00
Seward.....	38,603	501,839	677,482.65	38,603	154,412.00
Shawnee.....	28	560	812.00	98	392.00
Sheridan.....	3,264			816	4,080.00
Sherman.....	143			71	355.00
Smith.....	134	268	348.40	134	670.00
Stafford.....	2,031	40,620	52,806.00	2,031	8,124.00
Stanton.....	5,564	66,768	110,834.88	5,564	27,820.00
Stevens.....	33,446	535,136	727,784.96	33,446	167,230.00
Sumner.....	248	5,208	6,249.60	620	1,860.00
Thomas.....	16,920			8,460	42,300.00
Trego.....	5,917	11,834	15,739.22	2,958	16,269.00
Wabauasee.....	71	852	1,278.00	213	639.00
Wallace.....	717	4,302	5,377.50	358	1,790.00
Washington.....	140	2,100	3,150.00	280	1,680.00
Wichita.....	2,578	7,734	12,915.78	1,933	11,598.00
Wilson.....	1,154	21,926	26,311.20	2,308	6,924.00
Woodson.....	966	19,320	27,241.20	1,932	7,728.00
Wyandotte.....	4	48	67.20	14	56.00

MILO, 1918.

TABLE showing the total acres and value, and also the acres, tons and value of hay, separately, in 1918.

COUNTIES.	Aggregate.		Hay.		
	Acres.	Value.	Acres.	Tons.	Value.
The State.....	401,472	\$9,241,412.12	9,084	16,025	\$119,769.50
Allen.....	1,092	\$25,258.95	201	603	\$3,919.50
Anderson.....	632	16,258.20	134	402	2,613.00
Atchison.....	3	108.10	1	3	22.50
Barber.....	5,110	136,957.50	100	225	1,687.50
Barton.....	3,708	117,745.32	191	478	3,585.00
Bourbon.....	738	21,373.00	121	393	2,554.50
Brown.....					
Butler.....	1,143	36,996.80	37	120	720.00
Chase.....	400	10,080.00			
Chautauqua.....	538	10,940.25	103	232	1,392.00
Cherokee.....	244	4,719.00	6	12	78.00
Cheyenne.....	523	10,135.50	151	302	1,812.00
Clark.....	16,517	321,698.00	110	220	1,760.00
Clay.....	131	3,274.80	13	26	221.00
Cloud.....	1,336	26,287.50	46	69	552.00
Coffey.....	880	21,028.00	64	128	832.00
Comanche.....	6,084	168,641.50	80	160	1,280.00
Cowley.....	212	6,004.70	5	15	82.50
Crawford.....	51	937.00	39	98	637.00
Decatur.....	4,274	76,055.96	101	101	858.50
Dickinson.....	324	7,660.50	9	14	98.00
Doniphan.....	1	41.25			
Douglas.....	34	1,149.60	1	3	21.00
Edwards.....	2,323	47,823.00	80	80	720.00
Elk.....	1,531	41,127.00	55	151	906.00
Ellis.....	5,047	93,312.90	139	139	1,042.50
Ellsworth.....	2,551	71,274.00	11	22	154.00
Finney.....	22,508	688,895.00	20	25	200.00
Ford.....	29,104	327,100.00	259	324	2,592.00
Franklin.....	76	1,976.00			
Geary.....	88	2,508.00			
Gove.....	6,893	100,210.28	30	38	285.00
Graham.....	5,708	78,666.00	269	336	2,520.00
Grant.....	12,401	337,307.20			
Gray.....	11,013	172,512.00	528	528	4,752.00
Greeley.....	1,711	41,470.90	75	113	734.50
Greenwood.....	1,032	36,280.40	23	75	487.50
Hamilton.....	5,760	140,962.30	50	50	325.00
Harper.....	4,672	143,428.10	126	315	2,047.50
Harvey.....	141	4,140.00	5	10	60.00
Haskell.....	12,427	235,113.00	80	80	520.00
Hodgeman.....	10,415	119,214.60	12	12	102.00
Jackson.....	55	2,104.00	15	49	392.00
Jefferson.....	49	2,076.90	1	3	22.50
Jewell.....	616	14,321.00	15	30	195.00
Johnson.....	54	2,002.40	6	20	140.00
Kearny.....	8,267	251,183.00	43	54	351.00
Kingman.....	4,045	145,255.50	189	473	3,547.50
Kiowa.....	8,015	191,836.00	81	142	1,420.00
Labette.....	178	3,736.00	20	40	260.00
Lane.....	12,439	176,134.20	405	506	4,048.00
Leavenworth.....	22	941.60			
Lincoln.....	395	7,794.56	40	50	375.00
Linn.....	227	6,626.50	27	81	526.50
Logan.....	3,451	72,871.45	22	33	264.00

MILO, 1918—CONCLUDED.

COUNTIES.	Aggregate.		Hay.		
	Acres.	Value.	Acres.	Tons.	Value.
Lyon.....	1,366	\$42,661.90	90	203	\$1,319.50
Marion.....	209	5,511.80	5	10	65.00
Marshall.....	21	650.00	3	5	42.50
McPherson.....	529	16,280.50	33	66	396.00
Meade.....	29,195	370,602.00	595	744	5,952.00
Miami.....	132	3,294.00	16	48	336.00
Mitchell.....	1,431	35,217.60	42	84	630.00
Montgomery.....	239	4,353.60	5	8	48.00
Morris.....	427	9,645.00	86	172	1,204.00
Morton.....	18,030	722,101.50	.....	.....	.....
Nemaha.....	48	1,499.50	10	20	160.00
Neosho.....	183	4,569.00	13	36	234.00
Ness.....	5,448	72,977.20	40	60	510.00
Norton.....	5,537	104,464.80	171	299	2,242.50
Osage.....	608	16,234.50	103	283	1,839.50
Osborne.....	223	3,719.00	23	46	299.00
Ottawa.....	1,410	27,912.75	115	173	1,297.50
Pawnee.....	7,761	211,540.80	281	703	6,327.00
Phillips.....	1,913	34,674.00	38	76	494.00
Pottawatomie.....	79	2,491.20	17	51	408.00
Pratt.....	1,675	33,970.00	105	210	1,785.00
Rawlins.....	2,072	29,914.50	62	78	468.00
Reno.....	1,720	53,720.75	81	132	1,274.00
Republic.....	360	8,818.00	14	21	168.00
Rice.....	557	16,445.40	65	146	1,095.00
Riley.....	72	2,347.00	2	6	51.00
Rooks.....	5,290	93,838.50	80	120	840.00
Rush.....	1,059	20,137.60	188	329	2,632.00
Russell.....	604	14,300.50	44	55	412.50
Saline.....	318	7,481.00	11	17	110.50
Scott.....	7,824	116,755.92	766	1,149	9,192.00
Sedgwick.....	1,040	32,430.75	15	38	247.00
Seward.....	24,981	749,180.19	.....	.....	.....
Shawnee.....	44	1,606.00	.....	.....	.....
Sheridan.....	3,590	43,232.00	197	296	2,516.00
Sherman.....	1,243	23,215.50	124	155	1,395.00
Smith.....	385	7,202.00	.....	.....	.....
Stafford.....	524	14,753.20	102	230	1,840.00
Stanton.....	8,106	208,732.00	.....	.....	.....
Stevens.....	30,988	1,151,038.80	280	630	4,095.00
Sumner.....	434	10,817.95	5	13	71.50
Thomas.....	5,146	94,364.80	553	830	6,640.00
Trego.....	3,389	59,974.50	50	88	704.00
Wabaunsee.....	343	11,520.00	8	20	130.00
Wallace.....	1,268	33,854.40	90	158	1,106.00
Washington.....	255	6,399.20	88	132	1,122.00
Wichita.....	3,131	47,529.00	201	302	2,114.00
Wilson.....	1,085	23,006.50	34	68	408.00
Woodson.....	1,991	50,870.45	94	282	1,833.00
Wyandotte.....	.....	.....	.....	.....	.....

MILO FOR GRAIN (INCLUDING STOVER), 1918.

TABLE showing the acres, bushels and value of grain, and the tons and value of stover, in 1918.

COUNTIES.	Grain.			Stover.	
	Acres.	Bushels.	Value.	Tons.	Value.
The State.....	392,388	4,121,689	\$6,166,631.62	527,913	\$2,955,011.00
Allen.....	891	8,019	\$12,429.45	1,782	\$8,910.00
Anderson.....	498	3,984	6,175.20	1,494	7,470.00
Atchison.....	2	32	49.60	6	36.00
Barber.....	5,010	50,100	75,150.00	10,020	60,120.00
Barton.....	3,517	42,204	66,682.32	7,913	47,478.00
Bourbon.....	617	6,170	9,563.50	1,851	9,255.00
Brown.....					
Butler.....	1,106	14,373	23,004.80	3,318	13,272.00
Chase.....	400	4,800	7,680.00	600	2,400.00
Chautauqua.....	435	3,915	6,068.25	870	3,480.00
Cherokee.....	238	1,904	2,856.00	357	1,785.00
Cheyenne.....	372	3,720	5,394.00	651	2,929.50
Clark.....	16,407	131,256	196,884.00	20,509	123,054.00
Clay.....	118	944	1,604.80	207	1,449.00
Cloud.....	1,290	7,740	13,158.00	1,935	12,577.50
Coffey.....	816	8,160	13,056.00	1,428	7,140.00
Comanche.....	6,004	66,044	99,066.00	10,507	68,295.50
Cowley.....	207	2,484	3,850.00	518	2,072.00
Crawford.....	12	120	180.00	24	120.00
Decatur.....	4,173	33,384	48,072.96	4,173	27,124.50
Dickinson.....	315	3,150	5,197.50	473	2,365.00
Doniphan.....	1	15	23.25	3	18.00
Douglas.....	33	396	633.60	99	495.00
Edwards.....	2,243	20,187	30,280.50	2,243	16,822.50
Elk.....	1,476	14,760	23,616.00	3,690	16,605.00
Ellis.....	4,908	39,264	62,822.40	4,908	29,448.00
Ellsworth.....	2,540	25,400	40,640.00	5,080	30,480.00
Finney.....	22,488	337,320	505,980.00	28,110	182,715.00
Ford.....	28,845	115,380	173,070.00	21,634	151,438.00
Franklin.....	76	760	1,216.00	152	760.00
Geary.....	83	880	1,452.00	176	1,056.00
Gove.....	6,863	41,178	62,178.78	6,863	37,746.50
Graham.....	5,439	27,195	43,512.00	5,439	32,634.00
Grant.....	12,401	198,416	287,703.20	12,401	49,604.00
Gray.....	10,485	62,910	94,365.00	10,485	73,395.00
Greeley.....	1,636	19,632	28,466.40	2,454	12,270.00
Greenwood.....	1,009	11,099	17,758.40	3,279	18,034.50
Hamilton.....	5,710	74,230	112,087.30	5,710	28,550.00
Harper.....	4,546	54,552	84,555.60	11,365	56,825.00
Harvey.....	136	2,040	3,264.00	204	816.00
Haskell.....	12,347	123,470	179,031.50	12,347	55,561.50
Hodgeman.....	10,403	41,612	64,498.60	7,802	54,614.00
Jackson.....	40	640	992.00	120	720.00
Jefferson.....	48	768	1,190.40	144	864.00
Jewell.....	601	6,010	9,616.00	902	4,510.00
Johnson.....	48	624	998.40	144	864.00
Kearny.....	8,224	139,808	209,712.00	8,224	41,120.00
Kingman.....	3,856	57,840	89,652.00	8,676	52,056.00
Kiowa.....	7,934	87,274	130,911.00	7,934	59,505.00
Labette.....	158	1,264	1,896.00	316	1,580.00
Lane.....	12,034	72,204	111,916.20	12,034	60,170.00
Leavenworth.....	22	352	545.60	66	396.00
Lincoln.....	355	3,195	5,112.00	355	2,307.50
Linn.....	200	2,000	3,100.00	600	3,000.00
Logan.....	3,429	30,861	44,748.45	4,286	27,859.00

MILO FOR GRAIN (INCLUDING STOVER), 1918—CONCLUDED.

COUNTIES.	Grain.			Stover.	
	Acres.	Bushels.	Value.	Tons.	Value.
Lyon.....	1,276	17,864	\$28,582.40	2,552	\$12,760.00
Marion.....	204	2,448	3,916.80	306	1,530.00
Marshall.....	18	270	418.50	27	189.00
McPherson.....	496	6,944	11,110.40	868	4,774.00
Meade.....	28,600	171,600	257,400.00	21,450	107,250.00
Miami.....	116	1,160	1,798.00	232	1,160.00
Mitchell.....	1,389	12,501	20,001.60	2,431	14,586.00
Montgomery.....	234	1,872	2,901.60	351	1,404.00
Morris.....	341	3,410	5,456.00	597	2,985.00
Morton.....	18,030	342,570	496,726.50	45,075	225,375.00
Nemaha.....	38	570	883.50	76	456.00
Neosho.....	170	1,700	2,635.00	340	1,700.00
Ness.....	5,408	21,632	34,611.20	5,408	37,856.00
Norton.....	5,366	32,196	49,903.80	8,049	52,318.50
Osage.....	505	5,050	8,080.00	1,263	6,315.00
Osborne.....	200	1,200	1,920.00	300	1,500.00
Ottawa.....	1,295	9,065	14,957.25	1,943	11,658.00
Pawnee.....	7,480	67,320	107,038.80	13,090	98,175.00
Phillips.....	1,875	11,250	17,775.00	3,281	16,405.00
Pottawatomie.....	62	744	1,153.20	155	930.00
Pratt.....	1,570	14,130	21,195.00	1,570	10,990.00
Rawlins.....	2,010	14,070	20,401.50	2,010	9,045.00
Reno.....	1,639	24,585	38,106.75	2,868	14,340.00
Republic.....	346	3,460	5,536.00	519	3,114.00
Rice.....	492	5,904	9,446.40	984	5,904.00
Riley.....	70	630	1,071.00	175	1,225.00
Rooks.....	5,210	31,260	50,016.00	7,815	42,982.50
Rush.....	871	5,226	8,361.60	1,524	9,144.00
Russell.....	560	4,480	7,168.00	1,120	6,720.00
Saline.....	307	3,070	5,065.50	461	2,305.00
Scott.....	7,058	42,348	65,215.92	7,058	42,348.00
Sedgwick.....	1,025	13,325	20,653.75	2,306	11,530.00
Seward.....	24,981	424,677	624,275.19	24,981	124,905.00
Shawnee.....	44	660	1,056.00	110	550.00
Sheridan.....	3,393	13,572	20,358.00	3,393	20,358.00
Sherman.....	1,119	11,190	16,225.50	1,119	5,595.00
Smith.....	385	2,695	4,312.00	578	2,890.00
Stafford.....	422	5,064	7,849.20	844	5,064.00
Stanton.....	8,106	105,378	158,067.00	10,133	50,665.00
Stevens.....	30,708	552,744	801,478.80	69,093	345,465.00
Sumner.....	429	4,719	7,314.45	858	3,432.00
Thomas.....	4,593	36,744	53,278.80	5,741	34,446.00
Trego.....	3,339	16,695	26,712.00	5,009	32,558.50
Wabunsee.....	335	5,025	8,040.00	670	3,350.00
Wallace.....	1,178	16,492	23,913.40	1,767	8,835.00
Washington.....	167	1,837	2,939.20	334	2,338.00
Wichita.....	2,930	20,510	30,765.00	2,930	14,650.00
Wilson.....	1,051	10,510	16,290.50	1,577	6,308.00
Woodson.....	1,897	13,279	20,582.45	5,691	28,455.00
Wyandotte.....					

KAFIR, 1917.

TABLE showing the total acres and value, and also the acres, tons and value of hay, separately, in 1917.

COUNTIES.	Aggregate.		Hay.		
	Acres.	Value.	Acres.	Tons.	Value.
The State.....	1,480,438	\$32,857,108.02	72,020	153,587	\$1,061,026.00
Allen.....	22,714	\$829,642.45	171	598	\$3,438.50
Anderson.....	20,155	770,031.00	80	360	2,160.00
Atchison.....	701	16,180.00	57	228	1,368.00
Barber.....	28,068	734,632.30	1,551	4,265	21,325.00
Barton.....	11,634	338,539.20	1,608	3,216	25,728.00
Bourbon.....	10,314	406,594.40	516	1,548	9,288.00
Brown.....	488	8,791.00	98	392	3,136.00
Butler.....	68,418	1,749,652.50	1,211	2,725	19,075.00
Chase.....	12,828	400,765.69	67	268	1,474.00
Chautauqua.....	16,917	431,722.00	607	1,821	10,926.00
Cherokee.....	5,465	212,738.40	525	1,838	12,866.00
Cheyenne.....	2,264	34,299.60	566	1,132	10,188.00
Clark.....	41,271	643,413.60	260	520	3,640.00
Clay.....	4,958	112,166.80	613	1,226	8,582.00
Cloud.....	6,047	128,515.00	129	258	1,290.00
Coffey.....	20,669	589,988.80	556	1,946	9,730.00
Comanche.....	34,533	733,909.10	2,744	7,546	37,730.00
Cowley.....	35,884	1,396,800.40	290	1,015	5,075.00
Crawford.....	4,744	181,308.80	520	1,040	7,280.00
Decatur.....	12,318	221,104.00	1,225	3,062	21,434.00
Dickinson.....	5,496	161,252.64	492	1,476	10,332.00
Doniphan.....	36	906.00	2	8	56.00
Douglas.....	4,177	174,990.00	263	789	4,734.00
Edwards.....	13,843	312,671.00	1,413	2,826	21,195.00
Elk.....	21,545	644,995.18	271	881	5,286.00
Ellis.....	28,811	318,747.50	3,594	3,594	28,752.00
Ellsworth.....	17,977	323,473.50	887	2,439	15,853.50
Finney.....	13,885	300,087.00	55	151	1,359.00
Ford.....	48,100	686,683.20	3,356	4,195	35,658.00
Franklin.....	9,978	396,890.16	104	468	3,510.00
Geary.....	2,317	48,435.00	142	426	3,195.00
Gove.....	17,794	142,622.00	90	90	990.00
Graham.....	21,284	172,336.00	688	688	7,568.00
Grant.....	5,121	100,990.00	190	237	2,370.00
Gray.....	22,686	272,188.41	239	239	2,151.00
Greeley.....	1,430	25,76.20	611	916	9,160.00
Greenwood.....	34,829	816,141.00	275	687	4,122.00
Hamilton.....	821	26,658.20	100	200	2,000.00
Harper.....	22,477	509,257.26	3,483	9,579	47,895.00
Harvey.....	5,033	221,078.60	229	458	2,977.00
Haskell.....	13,076	145,021.00	295	443	4,430.00
Hodgeman.....	27,959	183,116.00	553	553	4,977.00
Jackson.....	2,123	34,669.00	469	1,641	8,205.00
Jefferson.....	1,646	48,808.05	65	260	1,300.00
Jewell.....	4,314	126,028.00	130	325	2,600.00
Johnson.....	917	34,402.50	39	117	819.00
Kearny.....	3,717	79,195.50	80	100	1,000.00
Kingman.....	21,906	405,662.00	2,637	6,592	39,552.00
Kiowa.....	25,403	467,878.08	2,459	7,377	59,016.00
Labette.....	11,007	402,904.44	138	448	3,360.00
Lane.....	7,978	55,866.00	10	10	90.00
Leavenworth.....	698	26,346.20	109	463	2,315.00
Lincoln.....	19,692	114,030.20	3,669	2,754	27,510.00
Linn.....	12,869	520,266.00	227	852	5,112.00
Logan.....	6,335	66,300.00	435	435	4,350.00

KAFIR, 1917—CONCLUDED.

COUNTIES.	Aggregate.		Hay.		
	Acres.	Value.	Acres.	Tons.	Value.
Lyon.....	27,817	\$597,843 50	80	300	\$1,500 00
Marion.....	12,605	298,110 10	518	1,683	13,464 00
Marshall.....	2,139	63,723 00	416	1,144	6,864 00
McPherson.....	8,869	253,793 50	2,156	7,007	49,049 00
Meade.....	45,031	583,582 10	1,240	1,240	9,920 00
Miami.....	2,851	110,946 50	34	136	1,088 00
Mitchell.....	6,419	109,454 00	539	944	8,024 00
Montgomery.....	14,763	454,630 70	750	2,250	14,625 00
Morris.....	13,719	302,118 88	97	315	1,890 00
Morton.....	7,555	115,040 50	30	60	510 00
Nemaha.....	1,575	30,093 00	357	1,428	9,996 00
Neosho.....	14,327	479,073 20	37	92	644 00
Ness.....	19,075	262,573 20	366	549	4,392 00
Norton.....	11,249	95,136 50	480	360	3,600 00
Osage.....	14,635	477,738 40	30	75	450 00
Osborne.....	20,786	128,816 00	514	898	7,184 00
Ottawa.....	10,245	226,996 56	521	1,172	8,790 00
Pawnee.....	35,469	754,586 60	1,409	4,227	25,362 00
Phillips.....	10,434	97,354 50	1,179	1,179	9,432 00
Pottawatomie.....	4,014	139,217 00	181	633	5,064 00
Pratt.....	36,851	1,027,894 08	1,803	4,957	30,428 00
Rawlins.....	4,541	70,819 00	631	738	6,304 00
Reno.....	19,495	554,826 00	2,224	6,116	36,696 00
Republic.....	1,763	29,229 50	56	112	1,064 00
Rice.....	9,394	247,453 60	1,453	2,906	20,342 00
Riley.....	3,231	119,680 80	511	2,044	14,308 00
Rooks.....	17,595	97,526 00	1,495	1,122	8,976 00
Rush.....	24,107	499,142 00	1,421	2,842	22,736 00
Russell.....	25,100	408,981 60	2,288	3,432	25,740 00
Saline.....	8,628	265,039 38	690	2,415	16,905 00
Scott.....	5,190	69,405 00	220	220	2,310 00
Sedgwick.....	17,775	422,195 20	943	2,594	20,752 00
Seward.....	26,865	642,796 50	140	140	1,400 00
Shawnee.....	4,114	153,467 20	482	1,928	9,640 00
Sheridan.....	19,419	134,490 00	719	359	3,590 00
Sherman.....	1,366	11,619 00	300	225	2,025 00
Smith.....	4,089	55,896 00	337	421	3,368 00
Stafford.....	15,159	459,159 50	1,213	2,729	16,374 00
Stanton.....	3,185	75,640 00			
Stevens.....	19,756	621,461 72	82	164	1,148 00
Sumner.....	28,965	994,113 04	392	1,372	8,918 00
Thomas.....	13,577	147,041 00	1,382	1,727	18,997 00
Trego.....	18,461	184,734 00	124	124	1,364 00
Wabaunsee.....	9,117	200,574 00	148	592	3,256 00
Wallace.....	1,646	29,096 80	210	210	2,100 00
Washington.....	3,353	86,298 00	352	880	5,280 00
Wichita.....	2,024	18,501 50	145	253	2,530 00
Wilson.....	19,223	816,718 80	94	329	2,303 00
Woodson.....	15,095	521,342 00	20	70	350 00
Wyandotte.....	107	4,072 20	18	63	441 00

KAFIR FOR GRAIN (INCLUDING STOVER), 1917.

TABLE showing the acres, bushels and value of grain, and the tons and value of stover, in 1917.

COUNTIES.	Grain.			Stover.	
	Acres.	Bushe's.	Value.	Tons.	Value.
The State.....	1,408,418	11,818,215	\$16,809,377.52	2,850,330	\$14,986,704.50
Al'en.....	22,543	428,317	\$578,227.95	61,994	\$247,976.00
Anderson.....	20,075	301,125	451,687.50	70,263	316,183.50
Atchison.....	644	6,440	9,660.00	1,288	5,152.00
Barber.....	26,517	371,238	501,171.30	53,034	212,136.00
Barton.....	10,026	130,338	182,430.20	20,052	130,338.00
Bourbon.....	9,798	176,364	238,091.40	31,843	159,215.00
Brown.....	390	1,170	1,755.00	975	3,900.00
But'er.....	67,207	537,656	806,484.00	168,017	924,093.50
Chase.....	12,761	165,893	220,637.69	51,044	178,654.00
Chautauqua.....	16,310	195,720	274,008.00	36,697	146,788.00
Cherokee.....	4,940	93,860	125,772.40	14,820	74,100.00
Cheyenne.....	1,698	6,792	10,527.60	1,698	13,584.00
Clark.....	41,011	164,044	229,661.00	51,264	410,112.00
Clay.....	4,345	34,760	51,444.80	13,035	52,140.00
Cloud.....	5,918	29,590	44,385.00	10,355	82,840.00
Coffey.....	20,113	181,017	253,423.80	65,367	326,835.00
Comanche.....	31,789	317,890	441,867.10	63,578	254,312.00
Cowley.....	35,594	533,910	768,830.40	88,985	622,895.00
Crawford.....	4,224	101,376	131,788.80	8,448	42,240.00
Decatur.....	11,093	44,372	66,558.00	16,639	133,112.00
Dickinson.....	5,004	65,052	85,868.64	16,263	65,052.00
Doniphan.....	34	340	510.00	85	340.00
Douglas.....	3,914	58,710	93,936.00	12,720	76,320.00
Edwards.....	12,430	124,300	182,721.00	21,751	108,755.00
Elk.....	21,274	234,014	320,599.18	53,185	319,110.00
Ellis.....	25,217	75,651	113,476.50	25,217	176,519.00
Ellsworth.....	17,090	34,180	51,270.00	42,725	256,350.00
Finney.....	13,830	124,470	174,258.00	27,660	124,470.00
Ford.....	44,744	223,720	349,003.20	67,116	302,022.00
Franklin.....	9,874	118,488	186,026.16	34,559	207,354.00
Geary.....	2,175	15,225	21,315.00	4,350	23,925.00
Gove.....	17,704	.....	.....	17,704	141,632.00
Graham.....	20,596	.....	.....	20,596	164,768.00
Grant.....	4,931	49,310	73,965.00	4,931	24,655.00
Gray.....	22,447	67,341	101,684.91	22,447	168,352.50
Greeley.....	819	6,552	10,483.20	819	5,733.00
Greenwood.....	34,554	310,986	466,479.00	86,385	345,540.00
Hamilton.....	721	8,652	13,843.20	1,412	10,815.00
Harper.....	18,994	208,934	2,0418.26	42,736	170,944.00
Harvey.....	4,804	100,884	141,237.60	19,216	76,864.00
Haskell.....	12,781	51,124	76,686.00	12,781	63,905.00
Hodgeman.....	27,406	27,406	41,109.00	27,406	137,030.00
Jackson.....	1,654	.....	.....	6,616	26,464.00
Jefferson.....	1,581	17,391	26,956.05	5,138	20,552.00
Jewell.....	4,184	37,656	56,484.00	8,368	66,944.00
Johnson.....	878	13,170	20,413.50	2,634	13,170.00
Kearny.....	3,637	40,007	60,010.50	3,637	18,185.00
Kingman.....	19,269	192,690	269,766.00	24,086	96,344.00
Kiowa.....	22,944	137,664	202,366.08	34,416	206,496.00
Labette.....	10,869	173,904	236,509.44	32,607	163,035.00
Lane.....	7,968	.....	.....	7,968	55,776.00
Leavenworth.....	589	10,602	16,963.20	1,767	7,068.00
Lincoln.....	16,023	16,023	22,432.20	8,011	61,088.00
Linn.....	12,642	227,556	341,334.00	34,764	173,820.00
Logan.....	5,900	.....	.....	8,850	61,950.00

KAFIR FOR GRAIN (INCLUDING STOVER), 1917—CONCLUDED.

COUNTIES.	Grain.			Stover.	
	Acres.	Bushels.	Val'ue.	Tons.	Val'ue.
Lyon	27,737	138,685	\$208,027.50	97,079	\$388,316.00
Marion	12,087	84,609	118,452.60	30,217	166,193.50
Marshall	1,723	18,953	28,429.50	5,169	28,429.50
McPherson	6,713	73,843	110,764.50	23,495	93,980.00
Meade	43,791	175,164	245,229.60	43,791	328,432.50
Miami	2,817	42,255	63,382.50	7,746	46,476.00
Mitchell	5,880	23,520	35,280.00	8,820	66,150.00
Montgomery	14,013	196,182	264,845.70	35,032	175,160.00
Morris	13,622	81,732	109,520.88	47,677	190,708.00
Morton	7,525	52,675	76,905.50	7,525	37,625.00
Nemaha	1,218	1,218	1,827.00	3,654	18,270.00
Neosho	14,200	200,060	264,079.20	35,725	214,350.00
Ness	18,709	56,127	89,803.20	28,063	163,378.00
Norton	10,769			10,769	91,536.50
Ossage	14,605	116,840	170,586.40	51,117	306,702.00
Osborne	20,272			20,272	121,632.00
Ottawa	9,724	58,344	86,932.56	21,879	131,274.00
Pawnee	34,060	306,540	456,744.60	68,120	272,480.00
Phillips	9,255	9,255	13,882.50	9,255	74,040.00
Pottawatomie	3,833	53,662	80,493.00	13,415	53,660.00
Pratt	35,048	455,624	646,986.08	70,096	350,430.00
Rawlins	3,910	15,640	23,460.00	5,865	41,055.00
Reno	17,271	259,065	362,691.00	34,542	155,439.00
Republic	1,707	10,242	15,363.00	1,707	12,802.50
Rice	7,941	111,174	155,643.60	17,867	71,463.00
Riley	2,720	35,360	52,332.80	8,840	53,040.00
Rooks	16,100			16,100	88,550.00
Rush	22,636	136,116	204,174.00	34,029	272,232.00
Russell	22,812	136,872	212,151.60	34,218	171,090.00
Saline	7,938	71,442	99,304.38	29,766	148,830.00
Scott	4,970	4,970	7,455.00	7,455	59,640.00
Sedgwick	16,832	151,488	212,083.20	42,080	189,360.00
Seward	26,725	267,250	360,787.50	40,087	280,609.00
Shawnee	3,632	58,112	92,979.20	12,712	50,848.00
Sheridan	18,700			18,700	130,900.00
Sherman	1,066			1,599	9,594.00
Smith	3,752	22,512	33,763.00	3,752	18,760.00
Stafford	13,946	209,190	303,325.50	27,892	139,460.00
Stanton	3,185	31,850	47,775.00	5,573	27,865.00
Stevens	19,674	334,458	448,173.72	34,428	172,140.00
Sumner	28,573	514,314	699,467.04	71,432	285,728.00
Thomas	12,195			18,292	128,044.00
Trego	18,337	36,674	55,011.00	18,337	123,359.00
Wabaunsee	8,969	35,876	53,814.00	35,876	143,504.00
Wallace	1,436	4,308	6,892.80	2,872	20,104.00
Washington	3,001	24,008	36,012.00	7,501	45,006.00
Wichita	1,879	1,879	2,818.50	1,879	13,153.00
Wilson	19,129	363,451	472,486.30	62,169	341,929.50
Woodson	15,075	241,200	340,092.00	45,225	180,900.00
Wyandotte	89	1,602	2,563.20	267	1,063.00

KAFIR, 1918.

TABLE showing the total acres and value, and also the acres, tons and value of hay, separately, in 1918.

COUNTIES.	Aggregate.		Hay.		
	Acres.	Value.	Acres.	Tons.	Value.
The State.....	1,307,102	\$30,778,396.39	56,863	118,910	\$919,535.50
Allen.....	14,528	\$416,955.65	39	117	\$760.50
Anderson.....	14,699	379,767.60	43	140	910.00
Atchison.....	417	22,684.00	172	602	6,020.00
Barber.....	42,057	1,326,374.50	1,262	3,471	26,032.50
Barton.....	12,454	290,833.54	917	2,293	20,637.00
Bourbon.....	8,077	188,753.10	393	1,081	7,026.50
Brown.....	91	6,296.00	8	32	320.00
Butler.....	59,486	2,005,880.90	126	473	3,074.50
Chase.....	10,114	207,957.45	397	893	5,358.00
Chautauqua.....	21,370	492,506.60	248	863	5,642.00
Cherokee.....	5,842	136,153.00	108	216	1,404.00
Cheyenne.....	2,154	47,706.00	204	357	2,856.00
Clark.....	31,971	567,003.00	634	1,268	10,778.00
Clay.....	3,406	111,276.50	571	1,142	10,278.00
Cloud.....	7,088	107,000.00	368	460	3,630.00
Coffey.....	14,861	408,272.60	5	13	104.00
Comanche.....	31,223	605,673.50	471	707	6,009.50
Cowley.....	42,725	1,418,942.65	312	1,014	6,591.00
Crawford.....	4,186	87,259.00	537	1,074	6,981.00
Decatur.....	12,070	133,416.00	490	735	6,615.00
Dickinson.....	3,762	116,550.50	364	819	6,961.50
Doniphan.....	18	1,136.00	5	20	200.00
Douglas.....	2,648	113,168.80	130	423	3,384.00
Edwards.....	10,084	147,259.50	1,889	2,834	14,089.00
Elk.....	19,133	439,178.60	271	678	4,407.00
Ellis.....	23,388	273,221.40	2,350	2,938	24,973.00
Ellsworth.....	15,839	459,880.00	641	1,442	11,536.00
Finney.....	12,827	321,672.20	25	38	342.00
Ford.....	45,621	431,578.30	1,433	1,433	12,897.00
Franklin.....	7,381	227,897.60	1,260	3,780	28,350.00
Geary.....	1,353	41,006.60	192	576	4,896.00
Gove.....	13,619	230,917.80	988	1,723	15,561.00
Graham.....	23,791	292,594.60	129	194	1,552.00
Grant.....	5,591	108,584.50	80	140	1,120.00
Gray.....	15,281	278,644.20	907	1,134	10,206.00
Greeley.....	920	19,320.00			
Greenwood.....	28,402	723,450.00	119	298	2,235.00
Hamilton.....	983	23,782.50	81	162	1,458.00
Harper.....	33,317	844,630.00	3,422	8,555	59,885.00
Harvey.....	3,675	95,511.40	292	876	5,694.00
Haskell.....	8,785	182,290.00			
Hodgeman.....	22,142	350,921.70	45	68	680.00
Jackson.....	2,082	132,192.00	44	176	1,760.00
Jefferson.....	1,245	78,971.00	38	124	1,116.00
Jewell.....	3,349	117,418.50	65	195	1,657.50
Johnson.....	676	33,540.00	10	30	240.00
Kearny.....	3,547	110,542.00	35	88	792.00
Kingman.....	27,994	819,275.80	2,853	6,419	44,933.00
Kiowa.....	16,589	417,025.00	922	1,844	17,518.00
Labette.....	10,612	253,353.50	173	433	2,814.50
Lane.....	5,553	84,615.75	20	25	237.50
Leavenworth.....	412	21,290.00	113	339	3,051.00
Lincoln.....	13,023	252,959.90	2,340	3,510	28,080.00
Linn.....	8,799	168,781.90	196	392	2,744.00
Logan.....	4,748	104,011.20	50	125	1,125.00

KAFIR, 1918.—CONCLUDED.

COUNTIES.	Aggregate.		Hay.		
	Acres.	Value.	Acres.	Tons.	Value.
Lyon.....	21,663	\$609,244.20.	80	240	\$1,680.00
Marion.....	7,791	165,121.40	239	717	5,019.00
Marshall.....	1,335	36,626.80	256	512	5,120.00
McPherson.....	4,776	102,801.60	1,504	3,760	28,200.00
Meade.....	41,694	724,995.60	744	930	8,370.00
Miami.....	1,931	58,051.90	162	405	3,037.50
Mitchell.....	8,283	188,810.40	466	932	7,456.00
Montgomery.....	16,440	334,400.00	1,355	2,710	17,615.00
Morris.....	8,107	208,301.80	866	2,382	17,865.00
Morton.....	8,510	336,145.00	.....	.....	.....
Nemaha.....	1,530	70,542.00	161	483	4,830.00
Neosho.....	12,667	299,255.30	55	151	981.50
Ness.....	8,707	126,860.20	241	241	2,410.00
Norton.....	17,014	369,185.10	948	2,607	22,159.50
Osage.....	10,190	235,446.10	217	543	4,072.50
Osborne.....	16,242	288,037.40	376	752	6,016.00
Ottawa.....	11,629	275,042.30	292	511	4,088.00
Pawnee.....	25,795	555,018.40	871	1,960	16,660.00
Phillips.....	11,195	189,194.21	1,006	2,012	17,102.00
Pottawatomie.....	2,988	139,594.00	273	819	8,190.00
Pratt.....	25,678	579,997.50	1,418	2,127	15,952.50
Rawlins.....	5,789	98,456.20	487	974	7,792.00
Reno.....	16,422	472,961.00	2,092	5,230	36,610.00
Republic.....	1,058	17,141.00	84	105	945.00
Rice.....	7,287	225,198.30	938	2,345	17,587.50
Riley.....	2,450	77,967.00	159	517	4,653.00
Rooks.....	23,533	391,546.50	1,258	1,887	15,096.00
Rush.....	11,216	172,014.00	542	678	5,763.00
Russell.....	20,984	346,095.60	1,360	1,700	14,450.00
Saline.....	7,022	120,228.74	339	593	4,744.00
Scott.....	4,062	62,811.00	302	378	3,591.00
Sedgwick.....	17,573	509,518.20	720	2,160	14,040.00
Seward.....	26,128	800,623.08	40	90	765.00
Shawnee.....	2,597	116,808.00	99	297	2,524.50
Sheridan.....	8,246	93,556.80	625	1,250	11,250.00
Sherman.....	1,928	47,343.50	243	547	4,376.00
Smith.....	2,814	77,199.40	202	455	3,867.50
Stafford.....	7,629	206,040.60	1,428	3,213	22,491.00
Stanton.....	5,107	146,536.00	25	50	425.00
Stevens.....	27,475	983,136.40	1,830	4,575	38,887.50
Sumner.....	42,433	1,114,888.95	732	1,830	11,895.00
Thomas.....	10,032	135,116.45	1,839	3,678	29,424.00
Trego.....	13,271	329,041.60	748	1,496	13,464.00
Wabaunsee.....	5,959	262,770.80	105	473	4,020.50
Wallace.....	1,621	32,593.92	85	128	1,152.00
Washington.....	4,191	94,400.50	84	210	1,995.00
Wichita.....	1,986	41,721.00	10	25	225.00
Wilson.....	16,593	361,176.20	129	323	2,261.00
Woodson.....	11,458	267,388.40	29	80	520.00
Wyandotte.....	65	3,557.00	12	36	324.00

KAFIR FOR GRAIN (INCLUDING STOVER), 1918.

TABLE showing the acres, bushels and value of grain, and the tons and value of stover, in 1918.

COUNTIES.	Grain.			Stover.	
	Acres.	Bushels.	Value.	Tons.	Value.
The State.....	1,250,239	9,808,678	\$15,202,510.39	2,507,047	\$14,656,350.50
Allen.....	14,489	101,423	\$157,205.65	47,089	\$258,989.50
Anderson.....	14,656	87,936	140,697.60	47,632	238,160.00
Atchison.....	245	6,125	9,800.00	858	6,864.00
Barber.....	40,795	530,335	795,502.50	91,789	504,839.50
Barton.....	11,537	69,222	108,678.54	23,074	161,518.00
Bourbon.....	7,684	61,472	95,281.60	17,289	86,445.00
Brown.....	83	2,075	3,320.00	332	2,656.00
Butler.....	59,360	652,960	1,038,206.40	192,920	964,600.00
Chase.....	9,717	68,019	105,429.45	19,434	97,170.00
Chautauqua.....	21,122	126,732	196,434.60	58,086	290,430.00
Cherokee.....	5,734	51,606	77,409.00	11,463	57,340.00
Cheyenne.....	1,950	19,500	30,225.00	2,925	14,625.00
Clark.....	31,337	188,022	282,033.00	39,171	274,197.00
Clay.....	2,835	34,020	59,535.00	6,379	41,463.50
Cloud.....	6,720	33,600	57,120.00	8,400	46,200.00
Coffey.....	14,856	89,136	142,617.60	40,854	265,551.00
Comanche.....	30,752	246,016	369,024.00	38,440	230,640.00
Cowley.....	42,413	466,543	723,141.63	137,842	689,210.00
Crawford.....	3,649	29,192	43,788.00	7,298	36,490.00
Decatur.....	11,580	34,740	57,321.00	11,580	69,480.00
Dickinson.....	3,398	33,980	56,067.00	7,646	53,522.00
Doniphan.....	13	325	520.00	52	416.00
Douglas.....	2,518	40,288	64,460.80	7,554	45,324.00
Edwards.....	8,195	40,975	61,462.50	10,244	71,70.00
Elk.....	18,862	113,172	175,416.60	51,871	259,355.00
Ellis.....	21,038	63,114	100,982.40	21,038	147,266.00
Ellsworth.....	15,198	151,980	243,168.00	34,196	205,176.00
Finney.....	12,802	153,624	238,117.20	12,802	83,213.00
Ford.....	44,188	88,376	136,982.80	33,141	281,698.50
Franklin.....	6,121	67,331	107,729.60	15,303	91,818.00
Geary.....	1,161	9,288	15,789.60	2,903	20,321.00
Gove.....	12,631	37,893	60,628.80	22,104	154,728.00
Graham.....	23,662	47,324	78,084.60	35,493	21,958.00
Grant.....	5,511	55,110	79,909.50	5,511	27,555.00
Gray.....	14,374	86,244	133,678.20	17,968	134,760.00
Greeley.....	920	8,280	12,420.00	1,150	6,900.00
Greenwood.....	28,283	169,698	254,547.00	77,778	466,668.00
Hamilton.....	902	9,020	13,30.00	1,353	8,794.50
Harper.....	29,895	298,950	448,425.00	67,264	336,320.00
Harvey.....	3,333	27,064	43,302.40	9,303	46,515.00
Haskell.....	8,785	70,280	105,420.00	15,374	76,870.00
Hodgeman.....	22,097	44,194	68,500.70	33,146	281,741.00
Jackson.....	2,038	40,760	65,216.00	8,152	65,216.00
Jefferson.....	1,207	30,175	48,250.00	4,225	29,575.00
Jewell.....	3,284	32,840	52,544.00	9,031	63,217.00
Johnson.....	666	13,320	21,312.00	1,998	11,988.00
Kearny.....	3,512	52,680	79,020.00	6,146	30,730.00
Kingman.....	25,141	326,833	522,932.80	50,282	251,410.00
Kiowa.....	15,667	156,670	235,005.00	27,417	164,502.00
Labette.....	10,439	62,634	93,951.00	26,098	156,588.00
Lane.....	5,533	27,665	42,880.75	5,533	41,497.50
Leavenworth.....	299	7,475	11,960.00	897	6,279.00
Lincoln.....	10,683	85,464	136,742.40	16,025	88,137.50
Linn.....	8,603	51,618	80,007.90	17,206	86,030.00
Logan.....	4,698	42,282	67,651.20	7,047	35,235.00

KAFIR FOR GRAIN (INCLUDING STOVER), 1918—CONCLUDED.

COUNTIES.	Grain.			Stover.	
	Acres.	Bushels.	Value.	Tons.	Value.
Lyon.....	21,583	194,247	\$310,795.20	53,958	\$296,769.00
Marion.....	7,552	52,864	84,582.40	15,104	75,520.00
Marshall.....	1,079	8,632	14,242.80	2,158	17,264.00
M Pherson.....	3,272	26,176	41,881.60	6,544	32,720.00
Meade.....	40,950	286,650	429,975.00	40,950	286,650.00
Miami.....	1,769	19,459	31,134.40	3,980	23,880.00
Mitchell.....	7,817	54,719	87,550.40	15,634	93,804.00
Montgomery.....	15,085	90,510	135,765.00	30,170	181,020.00
Morris.....	7,241	57,928	92,684.80	16,292	97,752.00
Morton.....	8,510	144,670	217,005.00	17,020	119,140.00
Nemaha.....	1,369	20,535	32,856.00	4,107	32,856.00
Neosho.....	12,612	100,896	156,388.80	28,377	141,885.00
Ness.....	8,466	33,864	52,489.20	8,466	71,961.00
Norton.....	16,066	64,264	106,035.60	40,165	240,990.00
Osage.....	9,973	69,811	111,697.60	19,946	119,676.00
Osborne.....	15,866	63,464	101,542.40	27,766	180,479.00
Ottawa.....	11,337	79,359	134,910.30	22,674	136,044.00
Pawnee.....	24,620	124,620	189,422.40	43,617	348,936.00
Phillips.....	10,189	30,567	49,824.21	20,378	122,268.00
Pottawatomie.....	2,715	43,440	71,676.00	7,466	59,728.00
Pratt.....	24,260	242,600	363,900.00	36,390	200,145.00
Rawlins.....	5,302	31,812	50,899.20	7,953	39,765.00
Reno.....	14,330	171,960	275,136.00	32,243	161,215.00
Republic.....	974	4,870	8,279.00	1,218	7,917.00
Rice.....	6,349	76,188	221,900.80	14,285	85,710.00
Riley.....	2,291	18,323	32,074.00	5,155	41,240.00
Rooks.....	22,275	111,375	175,972.50	33,413	200,478.00
Rush.....	10,674	42,696	66,178.80	13,343	100,072.50
Russell.....	19,624	78,496	125,593.60	29,436	206,052.00
Saline.....	6,683	40,098	65,359.74	10,025	50,125.00
Scott.....	3,760	18,800	29,140.00	3,760	30,080.00
Sedgwick.....	16,853	151,677	242,683.20	50,559	252,795.00
Seward.....	26,088	365,232	525,934.08	39,132	273,924.00
Shawnee.....	2,498	37,470	61,825.50	7,494	52,458.00
Sheridan.....	7,621	22,863	36,580.80	7,621	45,726.00
Sherman.....	1,685	16,850	26,117.50	3,370	16,850.00
Smith.....	2,612	18,284	29,254.40	5,877	44,077.50
Stafford.....	6,201	74,412	115,338.60	12,402	68,211.00
Stanton.....	5,082	55,902	83,853.00	8,894	62,258.00
Stevens.....	25,645	435,965	636,508.90	51,290	307,740.00
Sumner.....	41,701	375,309	581,728.95	104,253	521,265.00
Thomas.....	8,193	24,579	38,097.45	12,290	67,595.00
Trego.....	12,523	87,661	140,257.60	21,915	175,320.00
Wabaunsee.....	5,854	76,102	125,568.30	19,026	133,182.00
Wallace.....	1,536	13,824	21,841.92	1,920	9,600.00
Washington.....	4,107	20,535	34,909.50	7,187	57,496.00
Wichita.....	1,976	13,832	20,748.00	2,964	20,748.00
Wichita.....	16,464	98,784	153,115.20	41,160	205,800.00
Woodson.....	11,429	68,574	109,718.40	31,430	157,150.00
Wyandotte.....	53	1,325	2,120.00	159	1,113.00

FETERITA, 1917.

TABLE showing the total acres and value, and also the acres, tons and value of hay, separately, in 1917.

COUNTIES.	Aggregate.		Hay.		
	Acres.	Value.	Acres.	Tons.	Value.
The State.....	233,811	\$3,914,055.37	16,481	30,131	\$194,694.50
Allen.....	819	\$19,436.98	476	1,547	\$7,735.00
Anderson.....	488	20,650.50	185	740	4,440.00
Atchison.....	4	168.00	.....	.....	.....
Barber.....	1,777	42,081.50	308	770	4,620.00
Barton.....	2,846	82,526.20	70	140	1,120.00
Bourbon.....	345	7,265.20	148	444	2,220.00
Brown.....	2	42.00	2	6	42.00
Butler.....	1,076	28,340.00	223	557	4,456.00
Chase.....	351	9,354.50	130	455	2,501.50
Chautauqua.....	518	8,892.00	144	432	2,160.00
Cherokee.....	649	16,464.00	219	766	4,596.00
Cheyenne.....	90	1,410.00	35	70	420.00
Clark.....	6,311	113,661.00	568	568	4,544.00
Clay.....	1,227	31,994.10	132	396	2,970.00
Cloud.....	2,201	49,111.80	704	1,584	11,088.00
Coffey.....	464	12,986.40	104	312	1,560.00
Comanche.....	5,146	106,431.10	65	98	490.00
Cowley.....	506	14,863.30	123	492	2,952.00
Crawford.....	193	4,158.40	74	222	1,110.00
Decatur.....	2,976	41,024.50	198	297	1,782.00
Dickinson.....	375	8,142.00	39	97	582.00
Doniphan.....	2	42.00	2	6	42.00
Douglas.....	157	5,436.80	35	105	630.00
Edwards.....	2,000	58,464.40	84	168	1,176.00
Elk.....	309	11,942.00	19	57	342.00
Ellis.....	7,278	96,692.50	165	83	664.00
Ellsworth.....	1,364	31,321.00	14	42	336.00
Finney.....	4,000	76,118.86	118	90	495.00
Ford.....	11,122	169,663.40	476	714	5,712.00
Franklin.....	330	14,128.40	44	143	858.00
Geary.....	242	6,439.00	38	104	676.00
Gove.....	7,915	46,421.00	268	67	536.00
Graham.....	5,175	15,630.00	109	54	432.00
Grant.....	763	17,180.28	55	42	252.00
Gray.....	11,752	164,973.60	335	419	3,142.50
Greeley.....	259	3,077.50	80	120	840.00
Greenwood.....	566	14,064.75	81	222	1,332.00
Hamilton.....	633	12,988.50	240	480	3,360.00
Harper.....	974	21,071.60	223	558	3,348.00
Harvey.....	117	5,328.00	27	81	648.00
Haskell.....	1,823	25,981.50	.....	.....	.....
Hodgeman.....	7,094	62,889.10	275	275	2,200.00
Jackson.....	168	3,772.00	100	300	1,800.00
Jefferson.....	211	5,917.50	54	162	972.00
Jewell.....	1,710	44,823.60	93	186	1,488.00
Johnson.....	57	2,203.00	2	6	36.00
Kearny.....	1,725	34,982.00	20	40	200.00
Kingman.....	1,337	36,930.00	209	522	3,654.00
Kiowa.....	1,867	37,785.00	152	228	1,596.00
Labette.....	864	31,920.00	273	1,092	7,098.00
Lane.....	3,576	9,993.00	245	.....	.....
Leavenworth.....	71	2,303.60	27	95	570.00
Lincoln.....	1,356	28,040.88	75	75	525.00
Linn.....	204	4,923.00	62	217	1,302.00
Logan.....	2,003	11,641.00	190	95	760.00

FETERITA, 1917—CONCLUDED.

COUNTIES.	Aggregate.		Hay.		
	Acres.	Value.	Acres.	Tons.	Value.
Lyon.....	822	\$29,538.96	178	712	\$3,560.00
Marion.....	581	15,414.00	91	273	2,184.00
Marshall.....	112	4,440.00	50	125	875.00
McPherson.....	218	6,478.50	37	111	777.00
Meade.....	17,849	173,549.00	509	127	1,016.00
Miami.....	148	3,821.50	97	291	1,746.00
Mitchell.....	1,589	50,826.60	29	87	696.00
Montgomery.....	584	10,784.37	163	326	1,956.00
Morris.....	293	8,431.50	76	228	1,596.00
Morton.....	983	17,648.60			
Nemaha.....	87	4,118.40	20	60	420.00
Neosho.....	570	14,000.60	115	288	1,728.00
Ness.....	8,056	108,949.50	375	657	5,256.00
Norton.....	1,533	8,942.50	169	84	588.00
Osage.....	583	23,288.66	161	644	3,864.00
Osborne.....	2,190	40,224.00	360	270	2,160.00
Ottawa.....	3,774	100,555.02	355	355	2,840.00
Pawnee.....	9,521	234,347.80	189	283	1,981.00
Phillips.....	1,528	12,805.00	190	95	760.00
Pottawatomie.....	392	19,164.00	136	408	2,652.00
Pratt.....	3,149	83,799.24	228	456	3,648.00
Rawlins.....	2,471	43,563.00	102	153	918.00
Reno.....	1,363	39,364.50	113	339	1,864.50
Republic.....	117	1,809.00	54	67	469.00
Rice.....	724	19,487.60	55	165	1,155.00
Riley.....	156	4,316.00	52	156	1,092.00
Rooks.....	2,706	19,576.00	130	32	256.00
Rush.....	15,601	360,520.00	452	565	4,520.00
Russell.....	1,097	14,060.72	538	403	2,418.00
Saline.....	745	17,460.00	35	70	420.00
Scott.....	3,960	34,313.40	396	396	2,772.00
Sedgwick.....	1,221	37,768.50	121	363	2,541.00
Seward.....	10,037	175,649.00			
Shawnee.....	1 1	2,776.50	30	90	540.00
Sheridan.....	5,116		233		
Sherman.....	142	352.00	70	17	136.00
Smith.....	362	5,344.00	90	90	720.00
Stafford.....	129	2,803.25	34	51	357.00
Stanton.....	398	7,120.00	105	210	1,260.00
Stevens.....	3,921	84,986.54	83	41	246.00
Sumner.....	1,884	60,724.30	370	1,110	6,105.00
Thomas.....	7,425	54,598.50	312	156	1,248.00
Trego.....	5,272	46,811.16	263	66	528.00
Wabunsee.....	446	11,662.00	130	390	2,340.00
Wallace.....	333	2,004.00	91	114	912.00
Washington.....	1,603	73,685.00	101	227	1,589.00
Wichita.....	1,665	15,809.00	83	104	780.00
Wilson.....	776	19,440.00	206	618	3,708.00
Woodson.....	2,084	52,595.00	567	1,417	7,085.00
Wyandotte.....	6	236.40			

FETERITA FOR GRAIN (INCLUDING STOVER), 1917.

TABLE showing the acres, bushels and value of grain, and the tons and value of stover, in 1917.

COUNTIES.	Grain.			Stover.	
	Acres.	Bushels.	Value.	Tons.	Value.
The State.....	217,330	1,715,379	\$2,481,447.87	240,050	\$1,237,913.00
Allen.....	343	6,174	\$7,840.98	858	\$3,861.00
Anderson.....	303	7,575	11,362.50	1,212	4,848.00
Atchison.....	4	80	104.00	16	64.00
Barber.....	1,469	22,035	28,645.50	2,204	8,816.00
Barton.....	2,776	41,640	59,545.20	4,858	21,861.00
Bourbon.....	197	2,364	3,073.20	493	1,972.00
Brown.....					
Butler.....	853	10,236	15,354.00	1,706	8,530.00
Chase.....	221	3,535	4,420.00	608	2,432.00
Chautauqua.....	374	3,366	5,049.00	561	1,683.00
Cherokee.....	430	5,160	6,708.00	1,290	5,160.00
Cheyenne.....	55	220	330.00	110	660.00
Clark.....	5,743	57,430	80,402.00	5,743	28,715.00
Clay.....	1,095	15,330	17,956.10	2,464	11,088.00
Cloud.....	1,497	16,467	23,053.80	2,994	14,970.00
Coffey.....	360	5,040	7,106.40	1,080	4,320.00
Comanche.....	5,081	50,810	71,642.10	7,642	34,299.00
Cowley.....	383	6,511	8,464.30	1,149	3,447.00
Crawford.....	119	1,428	1,856.40	298	1,192.00
Decatur.....	2,778	11,112	16,668.00	3,473	22,574.50
Dickinson.....	336	3,360	4,200.00	840	3,360.00
Doniphan.....					
Douglas.....	122	2,196	2,854.80	488	1,952.00
Edwards.....	1,916	26,824	42,918.40	2,874	14,370.00
Elk.....	290	5,800	7,250.00	870	4,350.00
Ellis.....	7,113	49,791	74,686.50	3,557	21,342.00
Ellsworth.....	1,350	10,800	12,420.00	3,713	18,565.00
Finney.....	3,882	42,702	61,063.86	2,912	14,560.00
Ford.....	10,646	53,230	84,103.40	13,308	79,848.00
Franklin.....	286	5,720	8,122.40	858	5,148.00
Geary.....	204	3,060	4,131.00	408	1,632.00
Gove.....	7,647	15,294	22,941.00	3,824	22,944.00
Granam.....	5,066	10,132	15,198.00		
Grant.....	708	8,496	14,273.28	531	2,655.00
Gray.....	11,417	68,502	106,178.10	8,562	55,653.00
Greeley.....	179	895	1,342.50	179	895.00
Greenwood.....	485	7,275	9,093.75	1,213	3,639.00
Hamilton.....	393	5,109	7,663.50	393	1,965.00
Harper.....	751	9,012	11,715.60	1,502	6,009.00
Harvey.....	90	2,250	3,600.00	270	1,080.00
Haskell.....	1,823	12,761	19,141.50	1,368	6,840.00
Hodgeman.....	6,819	20,457	26,594.10	6,819	34,095.00
Jackson.....	68	680	884.00	272	1,088.00
Jefferson.....	157	2,355	3,061.50	628	1,884.00
Jewell.....	1,617	19,404	27,165.60	3,234	16,170.00
Johnson.....	55	990	1,287.00	220	880.00
Kearny.....	1,705	18,755	26,257.00	1,705	8,525.00
Kingman.....	1,128	16,920	21,996.00	2,820	11,280.00
Kiowa.....	1,715	17,150	23,324.00	2,573	12,865.00
Labette.....	591	10,638	15,957.00	1,773	8,865.00
Lane.....	3,331	6,662	9,993.00		
Leavenworth.....	44	792	1,029.60	176	704.00
Lincoln.....	1,281	11,529	19,829.88	1,281	7,686.00
Linn.....	142	1,420	1,917.00	426	1,704.00
Logan.....	1,813	3,626	5,439.00	907	5,442.00

FETERITA FOR GRAIN (INCLUDING STOVER), 1917—CONCLUDED.

COUNTIES.	Grain.			Stover.	
	Acres.	Bushels.	Value.	Tons.	Value.
Lyon.....	644	14,812	\$19,699.96	2,093	\$6,279.00
Marion.....	490	5,880	7,350.00	1,470	5,880.00
Marshall.....	62	1,550	2,325.00	248	1,240.00
McPherson.....	181	2,353	3,529.50	543	2,172.00
Meade.....	17,340	86,700	129,183.00	8,670	43,350.00
Miami.....	51	918	1,377.00	127	698.50
Mitchell.....	1,560	18,720	32,385.60	2,730	17,745.00
Montgomery.....	421	4,631	5,881.37	842	2,947.00
Morris.....	217	2,821	4,231.50	651	2,604.00
Morton.....	983	9,830	13,958.60	738	3,690.00
Nemaha.....	67	1,698	2,090.40	268	1,608.00
Neosho.....	455	5,460	7,152.60	1,024	5,120.00
Ness.....	7,681	38,405	57,697.50	7,681	46,086.00
Norton.....	1,364	4,092	6,138.00	341	2,216.50
Osage.....	422	8,018	10,984.66	1,688	8,440.00
Osborne.....	1,830	16,470	27,999.00	1,830	10,065.00
Ottawa.....	3,419	47,866	70,363.02	6,838	27,352.00
Pawnee.....	9,332	111,984	162,376.80	13,998	69,990.00
Phillips.....	1,338	4,014	6,021.00	1,004	6,024.00
Pottawatomie.....	256	7,168	10,752.00	960	5,760.00
Pratt.....	2,921	49,657	65,547.24	3,651	14,694.00
Rawlins.....	2,369	14,214	21,321.00	3,554	21,324.00
Reno.....	1,250	15,000	22,500.00	3,750	15,000.00
Republic.....	63	630	45.00	79	395.00
Rice.....	669	8,028	11,640.60	1,673	6,692.00
Riley.....	104	1,560	2,184.00	208	1,040.00
Rooks.....	2,576	10,304	15,456.00	644	3,861.00
Rush.....	15,149	151,490	242,384.00	18,936	113,616.00
Russell.....	559	4,472	6,752.72	978	4,890.00
Saline.....	710	7,100	9,230.00	1,420	7,810.00
Scott.....	3,564	10,692	15,503.40	2,673	16,038.00
Sedgwick.....	1,100	17,600	24,640.00	3,025	10,587.50
Seward.....	10,037	100,370	130,481.00	7,528	45,163.00
Shawnee.....	71	1,065	1,384.50	213	852.00
Sheridan.....	4,883				
Sherman.....	72			36	216.00
Smith.....	272	2,176	3,264.00	272	1,360.00
Stafford.....	95	1,425	2,066.25	95	380.00
Stanton.....	293	2,930	4,102.00	293	1,758.00
Stevens.....	3,838	49,894	70,350.54	2,878	14,390.00
Sumner.....	1,514	28,766	37,395.80	4,921	17,223.50
Thomas.....	7,113	21,339	32,008.50	3,557	21,342.00
Trego.....	5,009	10,018	13,724.66	5,009	32,558.50
Wabunsee.....	316	4,740	6,162.00	632	3,160.00
Wallace.....	242			182	1,092.00
Washington.....	1,502	31,542	47,313.00	4,506	24,783.00
Wichita.....	1,582	4,746	7,119.00	1,582	7,910.00
Wilson.....	570	6,840	8,892.00	1,710	6,840.00
Woodson.....	1,517	24,272	30,340.00	3,034	15,170.00
Wyandotte.....	6	108	140.40	24	96.00

FETERITA, 1918.

TABLE showing the total acres and value, and also the acres, tons and value of hay, separately, in 1918.

COUNTIES.	Aggregate.		Hay.		
	Acres.	Value.	Acres.	Tons.	Value.
The State.....	200,447	\$4,153,125.45	26,656	54,202	\$402,882.00
Allen.....	573	\$15,940.00	107	482	\$2,892.00
Anderson.....	566	18,644.20	115	460	3,220.00
Atchison.....	33	1,194.75	12	48	360.00
Barber.....	4,452	127,254.00	480	1,440	10,080.00
Barton.....	2,173	61,072.10	291	800	6,400.00
Bourbon.....	217	7,112.00	32	128	896.00
Brown.....	2	73.25	1	4	32.00
Butler.....	2,078	57,779.40	574	1,722	11,193.00
Chase.....	494	13,000.00	90	270	1,890.00
Chautauqua.....	414	6,898.50	227	511	3,066.00
Cherokee.....	368	6,839.00	119	268	1,608.00
Cheyenne.....	236	3,725.00	22	44	332.00
Clark.....	5,814	132,111.65	565	989	6,923.00
Clay.....	1,147	39,105.60	258	774	6,192.00
Cloud.....	2,844	59,098.00	302	529	3,174.00
Coffey.....	522	14,931.20	109	327	1,962.00
Comanche.....	4,494	104,604.00	174	348	2,436.00
Cowley.....	661	18,394.90	244	793	4,758.00
Crawford.....	55	1,155.00	10	20	140.00
Decatur.....	1,914	30,417.00	324	324	2,592.00
Dickinson.....	450	12,449.00	113	226	1,582.00
Doniphan.....					
Douglas.....	201	6,733.45	80	280	1,960.00
Edwards.....	1,650	32,750.00	218	218	1,962.00
Elk.....	385	10,907.50	80	240	1,680.00
Ellis.....	4,627	67,321.00	367	367	2,569.00
Ellsworth.....	2,634	87,722.75	227	624	4,680.00
Finney.....	4,769	120,634.00	192	192	1,632.00
Ford.....	16,402	176,383.50	691	691	5,528.00
Franklin.....	200	5,498.44	124	496	2,976.00
Geary.....	281	7,267.00	16	48	336.00
Gove.....	3,719	47,573.85	90	135	1,215.00
Graham.....	3,769	77,676.65	380	665	5,320.00
Grant.....	1,018	25,328.00	60	60	420.00
Gray.....	6,340	100,460.04	1,676	1,676	14,246.00
Greeley.....	208	3,034.00	119	179	1,432.00
Greenwood.....	889	19,429.00	335	670	5,025.00
Hamilton.....	472	11,711.28	83	166	1,494.00
Harper.....	2,271	60,154.50	570	1,425	9,975.00
Harvey.....	146	4,013.10	32	96	576.00
Haskell.....	3,423	55,852.68	526	658	4,606.00
Hodgeman.....	6,385	50,408.50	200	200	1,700.00
Jackson.....	276	9,763.50	70	210	1,575.00
Jefferson.....	167	6,478.50	20	70	525.00
Jewell.....	959	25,140.80	206	515	3,605.00
Johnson.....	34	982.50	24	84	588.00
Kearny.....	1,088	31,302.50	146	292	2,336.00
Kinman.....	3,134	103,428.00	324	810	6,480.00
Kiowa.....	2,256	55,786.80	264	462	3,696.00
Labette.....	366	7,652.00	87	196	1,372.00
Lane.....	4,486	81,446.50	802	1,604	12,832.00
Leavenworth.....	38	1,443.00	7	25	187.50
Lincoln.....	2,003	49,851.13	312	468	3,042.00
Linn.....	266	8,973.20	20	80	560.00
Logan.....	1,272	22,402.00	321	432	3,856.00

FETERITA, 1918—CONCLUDED.

COUNTIES.	Aggregate.		Hay.		
	Acres.	Value.	Acres.	Tons.	Value.
Lyon.....	1,256	\$45,069.00	140	420	\$2,940.00
Marion.....	679	16,503.00	196	588	3,222.00
Marshall.....	178	4,917.00	98	294	2,205.00
McPherson.....	451	12,811.85	52	130	780.00
Meade.....	17,633	290,930.40	269	336	2,688.00
Miami.....	126	3,967.25	51	179	1,253.00
Mitchell.....	1,543	34,351.80	126	221	1,547.00
Montgomery.....	311	5,695.50	124	217	1,302.00
Morris.....	704	21,400.14	237	711	4,977.00
Morton.....	633	21,891.50	63	173	1,297.50
Nemaha.....	68	2,019.75	41	123	984.00
Neosho.....	332	6,784.00	81	162	1,134.00
Ness.....	2,215	32,388.00	233	350	3,150.00
Norton.....	1,617	34,146.05	244	427	3,629.50
Osage.....	643	18,879.00	181	453	3,171.00
Osborne.....	2,721	59,263.00	309	541	3,787.00
Ottawa.....	5,348	100,862.00	816	1,224	7,956.00
Pawnee.....	5,091	139,970.90	454	908	8,626.00
Phillips.....	2,334	44,177.50	259	712	4,628.00
Pottawatomie.....	303	9,412.00	98	343	2,401.00
Pratt.....	1,627	37,151.50	440	880	7,920.00
Rawlins.....	553	7,297.50	153	153	1,147.50
Reno.....	867	25,853.90	118	354	2,655.00
Republic.....	938	19,404.00	295	590	4,130.00
Rice.....	342	10,438.00	46	138	966.00
Riley.....	315	9,022.90	81	284	2,272.00
Rooks.....	9,011	132,532.50	1,403	2,455	18,412.50
Rush.....	2,877	39,360.60	744	1,488	14,136.00
Russell.....	3,745	81,683.80	1,352	3,042	22,815.00
Saline.....	685	16,216.00	168	378	2,646.00
Sectt.....	2,422	38,831.65	753	1,130	9,040.00
Sedgwick.....	1,056	29,223.90	222	666	4,329.00
Seward.....	6,016	194,547.64	15	23	172.50
Shawnee.....	64	2,460.00	2	6	42.00
Sheridan.....	1,843	17,712.00	403	504	4,032.00
Sherman.....	176	2,590.00	104	182	1,456.00
Smith.....	1,150	19,719.00	380	760	5,320.00
Stafford.....	111	2,857.00	62	155	1,240.00
Stanton.....	435	10,701.00			
Stevens.....	2,538	85,760.90	561	1,543	11,572.50
Sumner.....	5,030	154,030.30	228	741	4,446.00
Thomas.....	637	10,828.50	286	501	4,509.00
Trego.....	1,796	31,688.75	511	1,022	9,198.00
Wabunsee.....	449	15,909.00	89	267	1,869.00
Wallace.....	304	4,710.00	140	175	1,225.00
Washington.....	1,730	48,534.25	505	1,389	11,112.00
Wichita.....	1,005	18,144.00	55	83	664.00
Wilson.....	411	9,877.50	135	405	2,632.50
Woodson.....	2,487	63,291.60	495	1,485	8,910.00
Wyandotte.....					

FETERITA FOR GRAIN (INCLUDING STOVER), 1918.

TABLE showing the acres, bushels and value of grain, and the tons and value of stover, in 1918.

COUNTIES.	Grain.			Stover.	
	Acres.	Bushels.	Value.	Tons.	Value.
The State.....	173,791	1,583,036	\$2,389,388.95	259,190	\$1,360,854.50
Allen.....	466	4,660	\$7,456.00	1,398	\$5,592.00
Anderson.....	451	5,412	8,659.20	1,353	6,765.00
Atchison.....	21	315	488.25	63	346.50
Barber.....	3,972	51,636	77,454.00	7,944	39,720.00
Barton.....	1,882	20,702	32,088.10	3,764	22,584.00
Bourbon.....	185	2,220	3,441.00	555	2,775.00
Brown.....	1	15	23.25	3	18.00
Butler.....	1,504	18,048	27,974.40	4,136	18,612.00
Chase.....	404	4,040	6,060.00	1,010	5,050.00
Chautauqua.....	187	1,683	2,524.50	327	1,308.00
Cherokee.....	249	2,490	3,735.00	374	1,496.00
Cheyenne.....	214	1,712	2,568.00	161	805.00
Clark.....	5,249	68,237	98,943.65	5,249	26,245.00
Clay.....	889	12,446	19,913.60	2,000	13,000.00
Cloud.....	2,542	25,420	40,672.00	3,813	15,252.00
Coffey.....	413	4,956	8,425.20	1,136	4,544.00
Comanche.....	4,320	51,840	75,168.00	5,400	27,000.00
Cowley.....	417	5,838	9,048.90	1,147	4,588.00
Crawford.....	45	450	675.00	68	340.00
Decatur.....	1,590	12,720	19,080.00	1,590	8,745.00
Dickinson.....	337	4,718	7,077.00	758	3,790.00
Doniphan.....					
Douglas.....	121	1,815	2,958.45	363	1,815.00
Edwards.....	1,432	14,320	21,480.00	1,432	9,308.00
Elk.....	305	3,355	5,032.50	839	4,195.00
Ellis.....	4,260	29,820	47,712.00	4,260	17,040.00
Ellsworth.....	2,407	36,105	55,962.75	5,416	27,080.00
Finney.....	4,577	59,501	89,251.50	4,577	29,750.50
Ford.....	15,711	62,844	94,266.00	11,783	76,589.50
Franklin.....	76	988	1,610.44	228	912.00
Geary.....	265	2,120	3,286.00	729	3,645.00
Gove.....	3,629	10,887	16,874.85	4,536	29,484.00
Graham.....	3,389	23,723	36,770.65	5,931	35,586.00
Grant.....	958	14,370	20,118.00	958	4,790.00
Gray.....	4,664	32,648	48,319.04	5,830	37,895.00
Greeley.....	89	712	1,068.00	89	534.00
Greenwood.....	554	5,540	8,310.00	1,108	6,094.00
Hamilton.....	389	4,668	6,815.28	486	3,402.00
Harper.....	1,701	22,113	33,169.50	3,402	17,010.00
Harvey.....	114	1,482	2,297.10	285	1,140.00
Haskell.....	2,897	23,176	33,141.68	3,621	18,105.00
Hodgeman.....	6,185	12,370	18,555.00	4,639	30,153.50
Jackson.....	206	3,090	4,789.50	618	3,399.00
Jefferson.....	147	2,205	3,528.00	411	2,425.50
Jewell.....	753	9,036	14,005.80	1,506	7,580.00
Johnson.....	10	150	244.50	30	150.00
Kearny.....	942	13,188	19,782.00	1,413	9,184.50
Kingman.....	2,810	39,340	59,010.00	6,323	37,938.00
Kiowa.....	1,992	23,904	34,660.80	3,486	17,430.00
Labette.....	279	2,790	4,185.00	419	2,095.00
Lane.....	3,684	25,788	38,682.00	4,605	29,932.50
Leavenworth.....	31	465	744.00	93	511.50
Lincoln.....	1,691	21,983	35,392.63	2,537	11,416.50
Linn.....	246	2,952	4,723.20	738	3,690.00
Logan.....	951	7,608	11,412.00	1,189	7,134.00

FETERITA FOR GRAIN (INCLUDING STOVER), 1918—CONCLUDED.

COUNTIES.	Grain.			Stover.	
	Acres.	Bushels.	Value.	Tons.	Value.
Lyon.....	1,116	16,740	\$26,784.00	3,069	\$15,345.00
Marion.....	483	4,830	7,245.00	1,208	5,436.00
Marshall.....	80	1,040	1,612.00	200	1,100.00
McPherson.....	399	5,187	8,039.85	.998	3,992.00
Meade.....	17,364	138,912	201,422.40	17,364	86,820.00
Miami.....	75	975	1,589.25	225	1,125.00
Mitchell.....	1,417	12,753	20,404.80	2,480	12,400.00
Montgomery.....	187	2,057	3,085.50	327	1,308.00
Morris.....	467	6,538	10,003.14	1,284	6,420.00
Morton.....	570	8,550	11,970.00	1,568	8,624.00
Nemaha.....	27	405	627.75	68	408.00
Neosho.....	251	2,510	3,765.00	377	1,885.00
Ness.....	1,982	7,928	11,892.00	2,478	17,346.00
Norton.....	1,373	9,611	14,897.05	2,403	15,619.50
Osage.....	462	6,930	11,088.00	924	4,620.00
Osborne.....	2,412	24,120	38,592.00	4,221	16,884.00
Ottawa.....	4,532	45,320	70,246.00	5,665	22,060.00
Pawnee.....	4,637	46,370	70,482.40	8,115	60,862.50
Phillips.....	2,075	14,525	22,949.50	4,150	16,600.00
Pottawatomie.....	205	2,460	3,936.00	615	3,075.00
Pratt.....	1,187	13,057	19,585.50	1,484	9,646.00
Rawlins.....	400	3,200	4,800.00	300	1,350.00
Reno.....	749	8,988	13,931.40	1,685	9,267.50
Republic.....	643	6,430	9,966.50	965	5,307.50
Rice.....	296	3,848	5,772.00	740	3,700.00
Riley.....	234	1,638	2,538.90	702	4,212.00
Rooks.....	7,608	38,040	60,864.00	13,314	53,256.00
Rush.....	2,133	8,532	13,224.60	1,600	12,000.00
Russell.....	2,393	23,323	42,116.80	4,188	16,752.00
Saline.....	517	5,170	7,755.00	1,163	5,815.00
Scott.....	1,669	11,683	18,108.65	1,669	11,683.00
Sedgwick.....	834	10,008	15,512.40	2,085	9,382.50
Seward.....	6,001	102,017	144,864.14	9,002	49,511.00
Shawnee.....	62	930	1,488.00	186	930.00
Sheridan.....	1,440	4,320	6,480.00	1,800	7,200.00
Sherman.....	72	576	864.00	54	270.00
Smith.....	770	5,390	8,624.00	1,155	5,775.00
Stafford.....	49	686	1,029.00	98	588.00
Stanton.....	435	6,090	8,526.00	435	2,175.00
Steves.....	1,977	31,632	44,284.80	5,437	29,903.50
Sumner.....	4,802	62,426	96,760.30	13,206	52,824.00
Thomas.....	351	2,457	3,685.50	439	2,634.00
Trego.....	1,285	6,425	9,958.75	1,928	12,532.00
Wabunsee.....	360	5,400	8,640.00	1,080	5,400.00
Wallace.....	164	1,640	2,460.00	205	1,025.00
Washington.....	1,225	13,475	20,886.25	2,756	16,536.00
Wichita.....	950	7,600	11,780.00	950	5,700.00
Wilson.....	276	2,760	4,140.00	690	3,105.00
Woodson.....	1,992	19,920	30,477.60	5,976	23,904.00
Wyandotte.....					

JERUSALEM CORN.

TABLE showing the number of acres, product and value for the years 1917 and 1918.

COUNTIES.	1917.			1918.		
	Acres.	Tons.	Value.	Acres.	Tons.	Value.
The State.....	1,938	3,507	\$25,935.75	2,448	5,224	\$41,738.50
Allen.....	5	17	\$97.75	5	15	\$97.50
Anderson.....	15	67	402.00	20	65	422.50
Atchison.....	2	8	48.00			
Barber.....	33	90	450.00	35	96	720.00
Barton.....	3	6	48.00	35	88	792.00
Bourbon.....	4	12	72.00	7	19	123.50
Brown.....	5	20	160.00			
Butler.....	23	52	364.00	8	30	195.00
Chase.....						
Chautauqua.....	16	48	288.00	5	18	117.00
Cherokee.....	69	241	1,687.00	15	30	195.00
Cheyenne.....	8	16	144.00	7	12	96.00
Clark.....				95	190	1,615.00
Clay.....	21	42	294.00	55	110	990.00
Cloud.....				23	29	232.00
Coffey.....	9	31	155.00	17	43	344.00
Comanche.....				10	15	127.50
Cowley.....				4	13	84.50
Crawford.....				2	4	26.00
Decatur.....	24	60	420.00	52	78	702.00
Dickinson.....	7	21	147.00	4	9	76.50
Doniphan.....						
Douglas.....	40	120	720.00	4	13	104.00
Edwards.....				9	14	119.00
Elk.....	50	162	972.00	4	10	65.00
Ellis.....				21	26	221.00
Ellsworth.....				30	68	544.00
Finney.....	10	27	243.00	13	20	180.00
Ford.....	10	12	102.00	100	100	900.00
Franklin.....	3	13	97.50	4	12	90.00
Geary.....	20	60	450.00	2	6	51.00
Gove.....	92	92	1,012.00	22	39	351.00
Graham.....	12	12	132.00	16	24	192.00
Grant.....	5	6	60.00	55	96	768.00
Gray.....	225	225	2,025.00	125	156	1,404.00
Greeley.....				3	6	54.00
Greenwood.....						
Hamilton.....	30	60	600.00	98	196	1,764.00
Harper.....	78	214	1,070.00	5	13	91.00
Harvey.....	11	22	143.00	33	99	643.50
Haskell.....						
Hedgeman.....	5	5	45.00	20	30	300.00
Jackson.....	3	10	50.00			
Jefferson.....	2	8	40.00	10	33	297.00
Jewell.....	7	17	136.00	10	30	255.00
Johnson.....	2	6	42.00			
Kearny.....	85	106	1,060.00	66	165	1,485.00
Kingman.....	10	25	150.00	24	54	378.00
Kiowa.....	6	18	144.00			
Labette.....				53	133	864.50
Lane.....	10	10	90.00			
Leavenworth.....				17	51	459.00
Lincoln.....	5	3	30.00			
Linn.....	6	22	132.00	4	8	56.00
Logan.....	202	202	2,020.00	161	403	3,627.00

JERUSALEM CORN—CONCLUDED.

COUNTIES.	1917.			1918.		
	Acres.	Tons.	Value.	Acres.	Tons.	Value.
Lyon.....	1	4	\$20.00	4	12	\$84.00
Marion.....				10	30	210.00
Marshall.....	5	14	84.00	13	26	260.00
McPherson.....				7	18	135.00
Meade.....	15	15	120.00	8	10	90.00
Miami.....	6	24	192.00	3	8	60.00
Mitchell.....	4	7	59.50	4	8	64.00
Montgomery.....	80	240	1,560.00	54	108	702.00
Morris.....	2	7	42.00			
Morton.....						
Nemaha.....	13	52	364.00	10	30	300.00
Neosho.....	19	47	329.00	50	138	897.00
Ness.....	20	30	240.00	33	33	330.00
Norton.....	6	4	40.00	3	8	63.00
Osage.....				5	13	97.50
Osborne.....				9	18	144.00
Ottawa.....	5	11	82.50	59	103	824.00
Pawnee.....	20	60	360.00	31	70	595.00
Phillips.....	12	12	96.00	56	112	952.00
Pottawatomie.....	1	3	24.00			
Pratt.....				6	9	67.50
Rawlins.....	4	5	40.00	43	86	688.00
Reno.....	46	127	762.00	180	450	3,150.00
Republic.....	3	6	57.00	3	4	36.00
Rice.....	3	6	42.00			
Riley.....	1	4	28.00	11	36	324.00
Rooks.....	5	4	32.00	53	80	640.00
Rush.....	10	20	160.00	8	10	85.00
Russell.....	200	300	2,250.00	11	14	119.00
Saline.....	16	56	392.00	21	37	296.00
Scott.....	21	21	220.50			
Sedgwick.....	11	31	248.00	63	189	1,223.50
Seward.....	5	5	50.00	35	79	671.50
Shawnee.....	4	16	80.00	37	111	943.50
Sheridan.....	165	83	830.00	137	274	2,466.00
Sherman.....				10	23	184.00
Smith.....				7	16	136.00
Stafford.....						
Stanton.....	20	25	225.00			
Stevens.....						
Sumner.....				118	295	1,917.50
Thomas.....	8	10	110.00			
Trego.....	17	17	187.00	5	10	90.00
Wabunsee.....	5	20	110.00			
Wallace.....	4	4	4.00			
Washington.....				12	30	285.00
Wichita.....						
Wilson.....				7	18	126.00
Woodson.....	7	25	125.00	14	39	253.50
Wyandotte.....	1	4	28.00			

SUDAN GRASS.

TABLE showing the number of acres, product and value for the years 1917 and 1918.

COUNTIES.	1917.			1918.		
	Acres.	Tons.	Value.	Acres.	Tons.	Value.
The State.....	26,731	62,065	\$574,038.50	79,166	165,704	\$1,751,721.50
Allen.....	176	572	\$5,720.00	309	1,004	\$10,040.00
Anderson.....	239	956	8,604.00	186	558	5,580.00
Atchison.....	17	51	510.00	33	95	1,045.00
Barber.....	832	2,496	19,968.00	2,482	6,826	78,499.00
Barton.....	183	366	4,392.00	417	1,251	12,510.00
Bourbon.....	79	237	1,896.00	47	141	1,410.00
Brown.....	.....	.....	.....	15	38	418.00
Butler.....	228	456	4,104.00	576	2,016	20,160.00
Chase.....	29	131	1,048.00	61	183	1,830.00
Chautauqua.....	74	222	1,998.00	177	575	5,750.00
Cherokee.....	190	475	4,275.00	100	125	1,375.00
Cheyenne.....	88	176	1,760.00	471	1,060	10,600.00
Clark.....	84	163	1,344.00	957	1,914	21,054.00
Clay.....	603	1,809	15,376.50	2,452	6,743	67,430.00
Cloud.....	259	842	8,420.00	2,833	4,250	46,750.00
Coffey.....	89	267	2,136.00	92	322	3,864.00
Comanche.....	273	546	4,368.00	1,347	2,694	28,287.00
Cowley.....	346	865	7,785.00	669	2,174	21,740.00
Crawford.....	53	106	848.00	111	222	2,220.00
Decatur.....	383	766	7,660.00	1,061	1,592	17,512.00
Dickinson.....	208	884	8,840.00	911	2,050	22,550.00
Doniphan.....	.....	.....	.....	3	8	88.00
Douglas.....	50	150	1,200.00	44	110	1,100.00
Edwards.....	351	790	6,320.00	1,001	1,251	13,761.00
Elk.....	25	75	750.00	58	116	1,218.00
Ellis.....	159	119	1,190.00	1,257	1,886	20,746.00
Ellsworth.....	109	218	1,962.00	654	1,799	17,990.00
Finney.....	488	732	8,418.00	1,686	3,794	39,837.00
Ford.....	443	856	8,860.00	3,226	3,226	38,712.00
Franklin.....	68	238	1,904.00	122	366	3,669.00
Geary.....	91	387	3,870.00	181	543	5,430.00
Gove.....	61	122	1,220.00	528	660	7,260.00
Graham.....	311	156	1,572.00	941	1,647	16,470.00
Grant.....	345	518	6,216.00	284	568	5,680.00
Gray.....	360	360	4,320.00	3,002	4,503	54,036.00
Greeley.....	307	691	8,292.00	421	737	7,370.00
Greenwood.....	39	137	1,096.00	24	60	600.00
Hamilton.....	134	235	2,820.00	146	329	3,948.00
Harper.....	1,276	3,509	28,072.00	2,359	4,718	47,180.00
Harvey.....	253	569	5,690.00	628	1,884	18,840.00
Haskell.....	129	194	1,940.00	534	1,068	11,748.00
Hodgeman.....	472	472	5,192.00	1,670	1,670	16,700.00
Jackson.....	36	144	1,296.00	37	111	1,110.00
Jefferson.....	64	256	2,048.00	38	114	1,140.00
Jewell.....	100	325	3,250.00	894	2,235	22,350.00
Johnson.....	10	30	240.00	88	176	1,760.00
Kearny.....	240	600	4,800.00	318	795	9,540.00
Kingman.....	290	653	5,224.00	1,187	2,374	23,740.00
Kiowa.....	199	548	4,932.00	786	1,572	18,864.00
Labette.....	605	1,815	18,150.00	705	1,410	15,510.00
Lane.....	137	343	3,430.00	592	888	9,768.00
Leavenworth.....	93	279	2,232.00	71	178	1,780.00
Lincoln.....	63	63	724.50	171	342	3,762.00
Linn.....	178	712	5,696.00	68	170	1,700.00
Logan.....	119	119	1,190.00	253	569	5,690.00

SUDAN GRASS—CONCLUDED.

COUNTIES.	1917.			1918.		
	Acres.	Tons.	Value.	Acres.	Tons.	Value.
Lyon.....	66	330	\$2,640.00	194	679	\$8,148.00
Marion.....	81	243	2,187.00	387	1,161	11,610.00
Marshall.....	104	390	3,900.00	167	334	4,008.00
McPherson.....	335	1,089	9,256.50	1,279	3,837	42,207.00
Meade.....	743	929	9,290.00	3,141	6,282	75,384.00
Miami.....	107	214	1,712.00	32	64	640.00
Mitchell.....	127	318	3,021.00	785	1,570	15,700.00
Montgomery.....	322	1,208	10,872.00	273	614	6,754.00
Morris.....	71	142	1,136.00	306	689	6,890.00
Morton.....	353	883	8,830.00	285	570	5,985.00
Nemaha.....	46	184	2,208.00	261	653	7,836.00
Neosho.....	223	669	6,021.00	201	603	6,030.00
Ness.....	446	669	6,690.00	863	1,510	15,100.00
Norton.....	641	480	4,320.00	1,095	1,613	16,430.00
Osage.....	113	452	3,616.00	117	351	3,861.00
Osborne.....	405	608	4,864.00	874	1,967	19,670.00
Ottawa.....	405	1,113	10,017.00	2,332	4,081	40,810.00
Pawnee.....	356	712	7,120.00	1,717	4,722	47,220.00
Phillips.....	209	261	2,349.00	389	778	8,598.00
Pottawatomie.....	139	383	3,830.00	297	743	8,173.00
Pratt.....	769	2,307	23,070.00	1,389	3,125	37,500.00
Rawlins.....	467	818	8,180.00	924	1,155	11,550.00
Reno.....	880	3,080	24,610.00	2,541	6,353	63,530.00
Republic.....	74	111	999.00	547	821	8,210.00
Rice.....	422	1,055	9,495.00	1,181	3,543	35,430.00
Riley.....	37	83	830.00	87	283	3,113.00
Rooks.....	527	527	6,324.00	1,366	1,708	18,788.00
Rush.....	169	254	2,540.00	814	1,221	12,210.00
Russell.....	93	140	1,400.00	397	794	8,734.00
Saline.....	159	636	5,724.00	771	1,542	16,962.00
Scott.....	299	299	2,990.00	572	715	7,865.00
Sedgwick.....	804	1,809	16,281.00	2,463	7,389	73,890.00
Seward.....	506	886	10,632.00	676	1,690	18,590.00
Shawnee.....	91	364	3,276.00	125	375	3,750.00
Sheridan.....	328	164	1,968.00	1,210	1,513	16,643.00
Sherman.....	314	314	3,140.00	621	1,242	12,420.00
Smith.....	237	119	1,428.00	693	1,733	17,330.00
Stafford.....	205	308	2,772.00	586	1,613	16,130.00
Stanton.....	89	178	1,424.00	126	252	2,520.00
Stevens.....	191	478	4,541.00	347	781	8,200.50
Sumner.....	1,437	5,030	42,755.00	3,918	10,775	107,750.00
Thomas.....	191	287	3,157.00	711	1,244	13,062.00
Trego.....	227	284	3,408.00	935	1,403	16,836.00
Wabaunsee.....	118	472	4,248.00	93	326	3,260.00
Wallace.....	131	197	2,364.00	734	1,468	14,680.00
Washington.....	129	290	2,610.00	417	626	7,512.00
Wichita.....	264	528	5,280.00	249	436	4,360.00
Wilson.....	205	820	8,200.00	272	748	7,480.00
Woodson.....	34	102	918.00	82	164	1,640.00
Wyandotte.....	4	12	96.00	35	105	1,050.00

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TABLE showing the number of acres, product and value for the years 1917 and 1918.

COUNTIES.	1917.			1918.		
	Acres.	Tons.	Value.	Acres.	Tons.	Value.
The State.....	1,131,373	3,069,548	\$56,570,863.00	1,227,875	2,746,460	\$58,751,741.00
Allen.....	3,547	10,996	\$230,916.00	4,213	11,586	\$289,650.00
Anderson.....	3,330	10,323	185,814.00	4,543	10,222	255,500.00
Atchison.....	8,590	25,770	515,400.00	6,901	17,253	431,325.00
Barber.....	8,444	23,643	449,217.00	8,228	16,456	345,576.00
Barton.....	8,530	25,590	435,030.00	9,602	26,406	554,526.00
Bourbon.....	3,983	11,949	250,929.00	6,578	18,090	416,070.00
Brown.....	13,067	39,201	784,020.00	13,819	27,638	690,950.00
Butler.....	40,582	121,746	2,191,428.00	43,820	120,505	2,289,595.00
Chase.....	21,029	63,087	1,135,566.00	21,870	65,610	1,377,810.00
Chautauqua.....	11,479	35,585	711,700.00	13,012	29,277	614,817.00
Cherokee.....	297	1,040	18,720.00	460	1,035	25,875.00
Cheyenne.....	2,836	7,941	134,997.00	4,006	11,017	198,306.00
Clark.....	2,339	4,210	75,780.00	2,015	3,526	74,046.00
Clay.....	16,941	35,576	569,216.00	19,164	28,746	661,153.00
Cloud.....	19,622	41,206	782,914.00	22,366	27,958	643,034.00
Coffey.....	5,827	17,481	314,658.00	7,576	17,046	375,012.00
Comanche.....	1,842	4,605	82,890.00	2,411	5,425	113,925.00
Cowley.....	37,213	111,639	1,897,863.00	38,007	104,519	2,090,380.00
Crawford.....	771	2,390	43,020.00	1,249	3,435	85,875.00
Decatur.....	3,576	8,225	131,600.00	3,038	6,836	129,884.00
Dickinson.....	28,032	86,899	1,477,283.00	29,719	66,868	1,337,360.00
Doniphan.....	11,136	36,749	734,980.00	12,735	35,021	840,504.00
Douglas.....	11,180	38,012	760,240.00	14,548	36,370	800,140.00
Edwards.....	2,738	7,666	130,322.00	2,851	5,702	119,742.00
Elk.....	14,474	43,422	731,596.00	17,135	47,121	942,420.00
Ellis.....	2,250	3,375	60,750.00	2,354	4,120	82,400.00
Ellsworth.....	8,144	21,989	395,802.00	8,649	21,623	432,460.00
Finney.....	16,032	49,699	993,980.00	13,935	38,321	766,420.00
Ford.....	5,393	14,561	262,098.00	3,919	7,838	156,760.00
Franklin.....	7,308	21,193	423,860.00	8,719	21,798	501,354.00
Geary.....	8,608	25,824	464,832.00	9,694	16,965	390,195.00
Gove.....	726	1,452	30,492.00	628	1,256	25,120.00
Graham.....	2,164	3,895	85,690.00	2,093	4,186	79,534.00
Grant.....	268	.....	.....	48	108	2,160.00
Gray.....	1,494	3,436	68,720.00	2,083	4,166	87,486.00
Greeley.....	104	208	3,744.00	74	148	2,664.00
Greenwood.....	19,512	58,536	1,053,648.00	21,961	60,393	1,268,253.00
Hamilton.....	3,475	9,730	165,410.00	2,957	7,393	155,253.00
Harper.....	10,497	27,292	463,964.00	11,087	22,174	443,480.00
Harvey.....	16,136	41,954	713,218.00	15,968	35,928	790,416.00
Haskell.....	.....	.....	.....	3	5	105.00
Hodgeman.....	1,905	4,763	95,260.00	1,765	3,530	67,070.00
Jackson.....	13,353	40,059	721,062.00	14,231	24,904	597,696.00
Jefferson.....	12,339	37,017	777,357.00	14,284	35,710	785,620.00
Jewell.....	44,443	93,330	1,773,270.00	46,410	92,820	1,856,400.00
Johnson.....	3,142	9,740	185,060.00	4,250	11,688	268,824.00
Kearny.....	8,488	23,766	404,022.00	8,362	20,905	418,100.00
Kingman.....	6,553	17,038	306,684.00	7,489	18,723	374,460.00
Kiowa.....	652	1,630	29,340.00	1,015	2,030	42,630.00
Labette.....	3,599	12,597	226,746.00	4,775	13,131	302,013.00
Lane.....	1,587	3,333	66,660.00	1,232	2,464	49,280.00
Leavenworth.....	6,613	19,339	436,458.00	7,631	20,985	503,640.00
Lincoln.....	9,321	18,642	372,840.00	9,456	16,548	364,056.00
Linn.....	2,202	6,606	132,120.00	2,690	5,380	134,500.00
Logan.....	3,831	10,344	206,880.00	3,243	8,108	170,268.00

ALFALFA—CONCLUDED.

COUNTIES.	1917.			1918.		
	Acres.	Tons.	Value.	Acres.	Tons.	Value.
Lyon.....	26,473	92,656	\$1,760,464.00	31,271	85,995	\$1,891,890.00
Marion.....	25,993	75,380	1,281,460.00	28,325	70,813	1,487,073.00
Marshall.....	24,717	64,264	1,156,752.00	29,158	36,448	911,200.00
McPherson.....	20,762	58,134	988,278.00	23,273	58,183	1,280,026.00
Meade.....	7,996	13,593	258,267.00	6,006	9,009	189,189.00
Miami.....	3,516	9,845	187,055.00	4,240	8,480	195,040.00
Mitchell.....	17,895	39,369	748,011.00	19,775	29,663	622,923.00
Montgomery.....	10,062	32,198	643,960.00	13,890	34,725	833,400.00
Morris.....	21,810	63,249	1,138,482.00	23,359	46,718	981,078.00
Morton.....	50	75	1,350.00	50	100	2,100.00
Nemaha.....	24,412	70,795	1,415,900.00	25,950	38,925	973,125.00
Neosho.....	4,043	12,129	242,580.00	4,571	12,570	314,250.00
Ness.....	2,585	5,429	97,722.00	2,853	5,706	108,414.00
Norton.....	6,185	12,370	259,770.00	5,451	13,628	272,560.00
Osage.....	21,559	60,365	1,146,935.00	26,177	52,354	1,204,142.00
Osborne.....	15,130	30,260	544,680.00	16,313	36,704	734,080.00
Ottawa.....	11,630	29,075	523,350.00	13,341	30,017	600,340.00
Pawnee.....	6,545	20,290	385,510.00	7,989	21,970	439,400.00
Phillips.....	14,393	30,225	634,725.00	14,186	31,919	670,299.00
Pottawatomie.....	24,968	74,904	1,348,272.00	26,010	45,518	1,001,396.00
Pratt.....	2,937	6,755	128,345.00	3,125	6,250	125,000.00
Rawlins.....	6,037	15,696	251,136.00	4,932	12,330	246,600.00
Reno.....	20,236	58,684	1,056,312.00	24,514	67,414	1,348,280.00
Republic.....	35,389	70,778	1,274,004.00	39,114	58,671	1,232,091.00
Rice.....	16,514	47,891	909,929.00	17,332	47,663	1,000,923.00
Riley.....	21,046	58,929	1,001,793.00	20,545	35,954	826,942.00
Rooks.....	7,510	15,020	270,360.00	7,313	14,626	277,894.00
Rush.....	3,128	7,820	156,400.00	2,971	5,199	109,179.00
Russell.....	4,897	9,794	176,292.00	4,597	8,045	168,945.00
Saline.....	17,347	46,837	843,066.00	19,110	42,998	945,956.00
Scott.....	1,639	4,917	88,506.00	1,954	4,885	107,470.00
Sedgwick.....	31,956	102,259	1,840,662.00	35,637	98,002	2,156,044.00
Seward.....	250	425	7,650.00	30	45	945.00
Shawnee.....	18,276	56,656	1,019,808.00	20,475	51,188	1,126,136.00
Sheridan.....	3,585	6,812	136,240.00	2,838	5,676	107,844.00
Sherman.....	3,209	8,023	160,460.00	2,371	6,520	117,360.00
Smith.....	34,050	71,505	1,287,090.00	34,090	68,180	1,367,600.00
Stafford.....	7,010	18,226	309,842.00	8,435	23,196	463,920.00
Stanton.....						
Stevens.....						
Sumner.....	22,978	68,934	1,309,746.00	25,841	77,523	1,550,460.00
Thomas.....	510	1,173	23,460.00	530	1,060	21,200.00
Trego.....	1,046	1,674	36,828.00	1,162	2,615	52,300.00
Wabunsee.....	23,905	69,325	1,247,850.00	26,918	67,295	1,480,490.00
Wallace.....	4,664	12,593	239,267.00	3,695	7,390	133,020.00
Washington.....	35,633	71,266	1,354,054.00	39,093	48,866	1,123,918.00
Wichita.....	843	2,023	36,414.00	778	1,751	33,260.00
Wilson.....	10,333	30,999	619,980.00	12,462	34,271	788,233.00
Woodson.....	2,180	6,540	130,800.00	3,001	7,503	187,575.00
Wyandotte.....	1,997	6,590	144,980.00	1,953	4,883	122,075.00

TAME GRASSES AND CLOVERS, 1917.

TABLE showing the number of acres, in 1917.

COUNTIES.	Timothy.	Clover.	Blue grass.	Sweet clover.	Orchard grass.	Other tame grasses.
The State.....	239,234	139,978	314,937	24,304	2,528	50,559
Allen.....	6,081	3,063	2,544	532	10	892
Anderson.....	9,488	9,852	3,253	127		183
Atchison.....	11,156	8,064	35,089	163		16
Barber.....		1		781		12
Barton.....				18		
Bourbon.....	17,943	1,716	2,169	76	26	23
Brown.....	11,456	10,547	35,359	2	369	8,003
Butler.....	5	10	709	3,997	20	190
Chase.....			290	317	16	20
Chautauqua.....	4	9	44	256		
Cherokee.....	2,045	191	1,857	17	2	782
Cheyenne.....		8		93		
Clark.....				30		
Clay.....			20	33		66
Cloud.....				52		17
Coffey.....	4,972	5,455	1,699	587	7	737
Comanche.....				21	7	
Cowley.....	11	125	379	2,575	21	7
Crawford.....	5,814	454	3,792	20	26	292
Decatur.....	1	1		82		
Dickinson.....	8	42	50	67	37	64
Doniphan.....	6,104	12,520	16,233		880	150
Douglas.....	6,316	4,620	3,830	101	34	96
Edwards.....				11		
Elk.....	181	238	216	704	20	1,055
Ellis.....				7		2
Ellsworth.....				10		49
Finney.....				1,285		
Ford.....				50	10	
Franklin.....	16,217	8,884	25,745	218	70	3,825
Geary.....	4		20	22		
Gove.....						15
Graham.....				74		20
Grant.....				14		
Gray.....				54		
Greely.....						
Greenwood.....	158	141	266	2,634		20
Hamilton.....				20		155
Harper.....				150	7	100
Harvey.....	16	10	24	320	2	
Haskell.....						
Hodgeman.....				30		
Jackson.....	14,165	6,617	21,785	276	11	980
Jefferson.....	15,912	8,099	28,388	61	283	941
Jewell.....				284	2	177
Johnson.....	15,587	8,161	17,023	20		10,327
Kearny.....				66		
Kingman.....	15			162	3	43
Kiowa.....				27		4
Labette.....	4,257	966	1,669	399	47	1,096
Lane.....				8		
Leavenworth.....	7,779	8,516	33,270	79	3	9,157
Lincoln.....				6		
Linn.....	24,504	8,278	9,230	102	5	1,703
Logan.....		4		59		

TAME GRASSES AND CLOVERS, 1917—CONCLUDED.

COUNTIES.	Timothy.	Clover.	Blue grass.	Sweet clover.	Orchard grass.	Other tame grasses.
Lyons.....	832	1,310	1,485	388	23	207
Marion.....	95	64	74	498	8	163
Marshall.....	4,328	634	7,365	108		174
McPherson.....		2	3	77	3	
Meade.....				38		120
Miami.....	23,231	8,577	21,670	34		3,740
Mitchell.....			1	6		
Montgomery.....	296	345	421	339	4	73
Morris.....	102	31	141	872	21	42
Morton.....						
Nemaha.....	14,474	4,152	14,586	217	66	858
Neosho.....	2,945	2,649	1,008	180	5	504
Ness.....				13		
Norton.....				109	1	
Osage.....	5,036	7,634	4,489	293	30	1,746
Osborne.....				111		
Ottawa.....	15			21		
Pawnee.....	6			29		127
Phillips.....		7	4	86		
Pottawatomie.....	1,044	123	1,382	111	13	223
Pratt.....		1		52	78	
Rawlins.....				15		
Reno.....	15	15	70	316	2	63
Republic.....	307	38	26	131	60	137
Rice.....	20	15		60	10	
Riley.....		91	314	62	12	24
Rooks.....				9		5
Rush.....				11		
Russell.....				5		5
Saline.....				4	20	26
Scott.....						
Sedgwick.....	13	13	169	897	99	151
Seward.....						
Shawnee.....	2,970	3,205	10,410	143	46	280
Sheridan.....						
Sherman.....			5	25		
Smith.....				82	26	15
Stafford.....				70		
Stanton.....				3		
Stevens.....				1		
Sumner.....		3	42	804	8	49
Thomas.....						
Trego.....				4		
Wabaunsee.....	493	1,011	1,184	325	21	343
Wallace.....				155		
Washington.....	207		176	149		107
Wichita.....				10		
Wilson.....	596	799	568	208	11	75
Woodson.....	836	974	407	102		83
Wyandotte.....	1,174	1,693	3,984	29	43	

TAME GRASSES AND CLOVERS, 1918.

TABLE showing the number of acres, in 1918.

COUNTIES.	Timothy.	Clover.	Blue grass.	Sweet clover.	Orchard grass.	Other tame grasses.
The State.....	217,722	109,746	311,704	23,552	2,751	55,364
Allen.....	5,235	1,792	3,893	612	10	354
Anderson.....	9,445	6,839	2,880	53	53	226
Atchison.....	8,772	8,303	25,085	25	.....	3
Barber.....	.....	105	.....	471	15	3
Barton.....	.....	.....	.....	18	.....	5
Bourbon.....	15,768	2,045	1,874	590	24	172
Brown.....	10,697	10,687	38,069	274	2	5,540
Butler.....	.....	92	517	2,546	103	102
Chase.....	.....	28	188	186	3	4
Chautauqua.....	8	18	88	728	11	361
Cherokee.....	747	206	183	67	42	1,316
Cheyenne.....	.....	.....	.....	40	.....	10
Clark.....	.....	.....	.....	64	.....	.....
Clay.....	25	10	1	65	.....	7
Cloud.....	.....	.....	3	194	3	36
Coffey.....	5,640	3,046	1,254	301	15	163
Comanche.....	.....	.....	.....	139	3	.....
Cowley.....	12	45	2	2,079	6	.....
Crawford.....	5,840	413	2,364	24	86	208
Decatur.....	.....	.....	.....	3	.....	.....
Dickinson.....	.....	4	61	182	.....	.....
Doniphan.....	5,311	14,106	16,848	.....	685	125
Douglas.....	5,790	2,649	4,832	78	18	411
Edwards.....	.....	.....	.....	19	.....	.....
Elk.....	119	384	176	1,379	205	661
Ellis.....	.....	.....	.....	.....	.....	.....
Ellsworth.....	.....	.....	.....	47	.....	4
Finney.....	.....	.....	.....	350	.....	.....
Ford.....	.....	.....	.....	.....	.....	.....
Franklin.....	17,252	4,207	21,552	75	28	3,808
Geary.....	.....	.....	.....	107	.....	.....
Gove.....	.....	.....	.....	.....	.....	.....
Graham.....	.....	20	.....	.....	50	58
Grant.....	.....	.....	.....	14	.....	.....
Gray.....	.....	.....	.....	35	.....	.....
Greeley.....	.....	.....	.....	.....	.....	.....
Greenwood.....	97	132	443	3,238	1	28
Hamilton.....	.....	.....	.....	25	.....	.....
Harper.....	.....	.....	7	80	.....	21
Harvey.....	20	.....	30	65	.....	.....
Haskell.....	.....	.....	.....	.....	.....	.....
Hodgeman.....	.....	.....	.....	5	.....	.....
Jackson.....	14,439	4,210	18,004	196	5	10,226
Jefferson.....	11,188	5,142	31,525	25	81	690
Jewell.....	2	12	30	587	21	178
Johnson.....	14,813	6,772	16,401	51	762	17,834
Kearny.....	.....	.....	.....	.....	.....	.....
Kingman.....	.....	.....	16	148	.....	22
Kiowa.....	.....	.....	.....	40	.....	.....
Labette.....	3,373	1,023	2,288	157	15	851
Lane.....	.....	.....	.....	.....	.....	.....
Leavenworth.....	7,865	10,240	40,521	145	38	2,645
Lincoln.....	.....	.....	.....	.....	.....	2
Linn.....	23,341	3,412	15,663	94	9	1,952
Logan.....	.....	.....	.....	2	.....	.....

TAME GRASSES AND CLOVERS, 1918—CONCLUDED.

COUNTIES.	Timothy.	Clover.	Blue grass.	Sweet clover.	Orchard grass.	Other tame grasses.
Lyon.....	854	891	1,019	269	70	100
Marion.....	50	23	228	564	7	8
Marshall.....	3,544	382	9,689	123	7	169
McPherson.....		16	5	79	4	50
Meade.....				9		60
Miami.....	19,780	7,117	16,715	9		359
Mitchell.....				12		20
Montgomery.....	251	290	462	109	2	137
Morris.....	58	80	262	1,231	33	49
Morton.....						
Nemaha.....	13,266	4,190	19,229	391	14	2,787
Neosho.....	1,508	2,061	1,224	99		352
Ness.....				6		2
Norton.....	2	13		20		
Osage.....	5,679	4,377	3,326	296	104	1,305
Osborne.....				42	12	
Ottawa.....			32	51	5	
Pawnee.....		10		10		10
Phillips.....	75	3		83		57
Pottawatomie.....	830	136	1,909	95	5	243
Pratt.....				32		
Rawlins.....						15
Reno.....				362	1	90
Republic.....	274	69	172	295	40	176
Rice.....	26	5		99	35	127
Riley.....	1		130	108	14	91
Rooks.....				49		
Rush.....			4			
Russell.....		3				8
Saline.....				14		57
Scott.....						
Sedgwick.....	12	14	104	1,197	15	91
Seward.....				20		
Shawnee.....	2,746	999	9,053	217	66	262
Sheridan.....						
Sherman.....				25		
Smith.....				122	2	11
Stafford.....	3	9		48		4
Stanton.....						
Stevens.....						
Sumner.....		22	8	709	8	10
Thomas.....						
Trego.....						
Wabaunsee.....	364	392	1,634	268	5	80
Wallace.....				17		
Washington.....	100	8	62	304		201
Wichita.....						
Wilson.....	464	778	703	377	1	364
Woodson.....	648	927	159	162		17
Wyandotte.....	888	989	727		14	26

TAME HAY.

TABLE showing the number of tons cut in 1916 and 1917, and value.

COUNTIES.	1916.		1917.	
	Tons.	Value.	Tons.	Value.
The State.....	486,174	\$7,896,851	338,026	\$7,293,234
Allen.....	8,862	\$146,223	7,338	\$161,436
Anderson.....	12,766	204,256	12,993	285,846
Atchison.....	22,754	386,818	15,583	327,243
Barber.....	108	1,620	1,062	20,178
Barton.....				
Bourbon.....	23,234	371,744	16,770	368,940
Brown.....	40,630	609,450	20,825	478,975
Butler.....	4,000	60,000	3,400	64,600
Chase.....	488	7,320	242	4,840
Chautauqua.....	250	3,750	1,206	24,120
Cherokee.....	2,570	43,690	1,500	34,500
Cheyenne.....				
Clark.....				
Clay.....			90	1,800
Cloud.....			200	4,000
Coffey.....	12,244	183,660	10,355	207,100
Comanche.....			140	2,660
Cowley.....	4,500	67,500	2,100	39,900
Crawford.....	9,007	153,119	8,506	195,638
Decatur.....				
Dickinson.....			250	5,000
Doniphan.....	27,002	472,535	13,909	278,180
Douglas.....	21,759	369,903	10,423	229,306
Edwards.....				
Elk.....	2,600	39,000	2,000	40,000
Ellis.....				
Ellsworth.....				
Finney.....	1,895	32,215	400	7,200
Ford.....				
Franklin.....	21,982	373,694	18,464	406,208
Geary.....			150	3,000
Gove.....				
Graham.....				
Grant.....			10	190
Gray.....			40	800
Greeley.....				
Greenwood.....	2,843	42,645	3,000	60,000
Hamilton.....				
Harper.....	250	3,750	80	1,520
Harvey.....	270	4,320	100	2,000
Haskell.....				
Hodgeman.....				
Jackson.....	19,400	310,400	13,350	293,700
Jefferson.....	20,452	357,910	12,743	267,603
Jewell.....	450	6,750	530	9,540
Johnson.....	22,014	374,238	19,476	428,472
Kearny.....				
Kingman.....	250	3,750	150	2,850
Kiowa.....			85	1,615
Labette.....	7,077	113,232	3,855	84,810
Lane.....				
Leavenworth.....	23,438	410,165	18,722	411,884
Lincoln.....				
Linn.....	28,022	448,352	27,000	594,000
Logan.....	55	880		

TAME HAY—CONCLUDED.

COUNTIES.	1916.		1917.	
	Tons.	Value.	Tons.	Value.
Lyon.....	4,040	\$60,600	2,000	\$40,000
Marion.....	230	3,680	800	16,000
Marshall.....	9,711	145,665	3,563	74,928
McPherson.....	100	1,650	100	2,000
Meade.....				
Miami.....	25,265	429,505	25,190	554,180
Mitchell.....				
Montgomery.....	1,372	22,638	1,800	39,600
Morris.....	1,000	15,000	1,900	38,000
Morton.....				
Nemaha.....	37,118	556,770	20,184	444,048
Neosho.....	8,044	128,704	3,131	68,882
Ness.....				
Norton.....				
Osage.....	29,432	470,912	9,420	188,400
Osborne.....			50	900
Ottawa.....			131	2,489
Pawnee.....	150	2,550		
Phillips.....	100	1,600	200	3,600
Pottawatomie.....	1,850	27,750	2,735	54,700
Pratt.....				
Rawlins.....				
Reno.....	400	6,400	400	8,000
Republic.....	750	11,250	700	14,000
Rice.....			100	2,000
Riley.....	500	7,500	200	4,000
Rooks.....			70	1,260
Rush.....				
Russell.....				
Saline.....				
Scott.....				
Sedgwick.....	1,200	18,000	1,200	24,000
Seward.....			40	760
Shawnee.....	9,298	148,768	7,371	162,162
Sheridan.....	180	2,700		
Sherman.....	60	960		
Smith.....	110	1,650	125	2,250
Stafford.....			75	1,425
Stanton.....				
Stevens.....				
Sumner.....	900	13,500	700	13,300
Thomas.....				
Trego.....				
Wabauensee.....	2,113	31,695	3,000	60,000
Wallace.....	150	2,250		
Washington.....	500	7,500	500	11,000
Wichita.....				
Wilson.....	2,300	34,500	3,000	63,000
Woodson.....	2,019	30,285	1,317	26,340
Wyandotte.....	6,110	109,980	972	22,356

PRAIRIE HAY.

TABLE showing the acres, product and value for the years 1917 and 1918.

COUNTIES.	1917.			1918.		
	Acres.	Tons.	Value.	Acres.	Tons.	Value.
The State.....	1,121,912	1,031,986	\$14,782,475	1,015,045	694,208	\$12,070,049
Allen.....	25,537	25,537	\$408,592	24,478	18,359	\$348,821
Anderson.....	28,151	28,151	394,114	29,640	22,230	444,600
Atchison.....	1,986	1,986	31,776	2,214	2,214	42,066
Barber.....	1,122	1,122	15,708	2,459	2,459	36,885
Barton.....	11,857	11,857	165,998	13,317	9,988	159,808
Bourbon.....	23,801	17,850	285,600	23,419	11,710	210,780
Brown.....	6,511	6,511	97,665	1,309	1,309	23,562
Butler.....	25,031	25,031	325,403	25,597	12,799	204,784
Chase.....	6,727	6,727	94,178	5,910	4,433	70,928
Chautauqua.....	22,339	22,339	312,746	14,523	7,262	116,192
Cherokee.....	17,480	17,480	244,720	16,038	8,019	168,399
Cheyenne.....	4,790	4,790	62,270	4,989	3,742	56,130
Clark.....	905	905	12,670	284	284	4,544
Clay.....	10,994	8,245	98,940	11,360	5,680	102,240
Cloud.....	6,318	4,738	66,332	7,385	3,693	62,781
Coffey.....	37,669	37,669	565,035	36,385	27,289	491,202
Comanche.....	669	669	8,697	1,336	1,002	16,032
Cowley.....	17,624	17,624	229,112	18,358	18,358	293,728
Crawford.....	12,157	12,157	170,198	14,819	7,410	163,020
Decatur.....	5,656	2,828	36,764	2,955	1,478	22,170
Dickinson.....	17,326	17,326	225,238	16,603	12,452	199,232
Doniphan.....	7,286	7,286	116,576	5,915	5,915	106,470
Doug'as.....	10,527	10,527	157,905	10,486	7,865	141,570
Edwards.....	2,675	1,337	16,044	1,809	905	15,385
Elk.....	38,761	29,070	436,050	23,738	11,869	189,904
Ellis.....	5,362	4,021	56,294	4,061	4,061	60,915
Ellsworth.....	6,710	6,710	93,940	7,261	5,446	81,690
Finney.....	1,260	1,260	17,640	2,128	1,596	23,940
Ford.....	2,060	2,060	30,900	2,613	1,960	29,400
Franklin.....	18,438	18,438	295,008	13,795	10,346	196,574
Geary.....	9,413	9,413	131,782	7,785	5,839	105,102
Gove.....	653	326	5,216	13	13	195
Graham.....	5,530	2,765	38,710	5,478	2,739	41,085
Grant.....	1,218	1,218	17,052	220	165	2,640
Gray.....	980	490	6,860	240	120	1,800
Greeley.....	55	55	770			
Greenwood.....	26,992	20,244	283,416	21,426	10,713	171,408
Hamilton.....	5,755	5,755	86,325	1,938	1,938	29,070
Harper.....	2,166	2,166	28,158	2,249	1,687	26,992
Harvey.....	11,373	11,373	147,849	10,346	7,760	131,920
Haskell.....						
Hodgeman.....	1,830	915	12,810	675	338	5,070
Jackson.....	17,163	17,163	240,282	14,384	10,788	204,972
Jefferson.....	9,573	9,573	143,595	8,802	8,802	158,436
Jewell.....	8,520	6,390	89,460	9,251	6,938	104,070
Johnson.....	7,490	7,490	119,840	7,618	5,714	102,852
Kearny.....	1,945	1,945	25,285	2,260	2,260	33,900
Kingman.....	5,863	5,863	76,219	5,337	4,003	64,048
Kiowa.....	834	834	10,842	995	746	12,682
Labette.....	22,831	22,831	319,634	20,870	15,653	297,407
Lane.....	310	232	3,016	430	430	6,450
Leavenworth.....	7,088	7,088	120,496	4,497	3,373	67,460
Lincoln.....	5,759	2,879	43,185	4,976	2,488	37,320
Linn.....	12,263	12,263	183,945	11,348	5,674	107,806
Logan.....	1,716	1,716	27,456	533	400	6,000

PRAIRIE HAY—CONCLUDED.

COUNTIES.	1917.			1918.		
	Acres.	Tons.	Value.	Acres.	Tons.	Value.
Lyon.....	27,689	27,689	\$387,646	26,343	19,757	\$355,626
Marion.....	17,665	17,665	229,645	18,060	13,545	216,720
Marshall.....	25,370	25,370	355,180	23,085	11,543	230,860
McPherson.....	18,098	22,622	294,086	15,853	11,890	190,240
Meade.....	5,121	5,121	71,694	2,371	1,778	28,448
Miami.....	8,397	8,397	134,752	6,887	5,165	98,135
Mitchell.....	11,257	8,442	126,630	3,482	2,612	39,180
Montgomery.....	15,897	15,897	238,455	14,305	7,153	128,754
Morris.....	14,692	18,365	257,110	16,945	8,473	135,568
Morton.....						
Nemaha.....	13,522	13,522	202,830	12,583	9,437	188,740
Neosho.....	21,350	16,012	256,192	22,909	11,455	217,645
Ness.....	2,285	2,285	27,420	1,092	819	12,285
Norton.....	11,438	5,729	85,935	9,816	7,362	110,450
Osage.....	26,849	26,849	402,735	27,102	20,327	365,886
Osborne.....	8,625	6,468	84,084	7,659	5,744	86,160
Ottawa.....	7,651	3,825	53,550	4,955	2,478	37,170
Pawnee.....	2,524	1,893	22,716	8,743	8,743	131,145
Phillips.....	12,366	6,183	98,928	12,382	9,287	148,592
Pottawatomie.....	31,865	31,865	446,110	24,806	12,403	223,254
Pratt.....	1,127	1,127	15,778	1,039	779	12,464
Rawlins.....	2,020	1,515	18,180	1,313	985	15,760
Reno.....	9,541	9,541	114,492	10,509	10,509	168,144
Republic.....	9,178	4,589	64,246	9,040	4,520	81,360
Rice.....	9,887	9,887	118,644	4,781	4,781	71,715
Riley.....	14,239	14,239	199,346	13,879	10,409	187,362
Rooks.....	6,839	5,129	66,677	3,725	2,794	41,910
Rush.....	7,298	5,473	82,095	3,543	2,657	42,512
Russell.....	6,299	4,724	61,412	5,834	2,917	43,755
Saline.....	14,736	14,736	221,040	6,404	4,803	76,848
Scott.....	2,045	2,045	26,585	900	675	10,125
Sedgwick.....	17,841	17,841	231,933	18,290	18,290	292,640
Seward.....	930	930	13,950	5,640	4,230	67,680
Shawnee.....	24,662	24,662	369,930	23,280	17,460	314,280
Sheridan.....	4,675	2,337	35,055	4,082	3,062	48,992
Sherman.....	4,063	4,063	52,819	4,419	3,314	49,710
Smith.....	15,270	3,817	53,438	12,550	9,413	141,195
Stafford.....	4,830	4,830	57,960	4,502	4,502	67,530
Stanton.....						
Stevens.....	350	262	3,668			
Sumner.....	10,892	10,892	152,488	10,394	10,394	166,304
Thomas.....	636	636	9,540	400	300	4,500
Trego.....	350	262	3,930	706	706	10,590
Wabaunsee.....	22,784	22,784	296,192	22,718	17,039	306,702
Wallace.....	2,735	2,735	41,025	3,291	3,291	52,656
Washington.....	21,832	21,832	283,816	20,922	10,461	188,298
Wichita.....	540	540	7,020	80	80	1,200
Wilson.....	24,067	18,050	288,800	26,810	20,108	382,052
Woodson.....	53,405	53,405	854,480	49,434	24,717	469,623
Wyandotte.....	1,111	1,666	28,322	327	327	6,867

CORN AND WHEAT ON HAND.

TABLE showing the number of bushels on hand March 1, 1917, and March 1, 1918.

COUNTIES.	1917.		1918.	
	Corn bushels.	Wheat bushels.	Corn bushels.	Wheat bushels.
The State.....	12,582,319	5,063,361	22,481,580	2,839,714
Allen.....	76,212	125	282,541	4,435
Anderson.....	78,845	418	277,347	4,297
Atchison.....	169,835	10,180	328,503	11,430
Barber.....	71,334	30,610	23,162	25,510
Barton.....	19,785	174,925	149,052	43,877
Bourbon.....	66,364	550	397,439	14,216
Brown.....	639,862	39,985	1,335,839	31,054
Butler.....	130,046	7,979	159,613	11,573
Chase.....	25,090	4,475	136,741	7,080
Chautauqua.....	24,938	515	10,785	2,453
Cherokee.....	8,896	5,554	146,930	16,193
Cheyenne.....	79,160	159,665	188,880	42,430
Clark.....	21,625	54,470	10,265	3,313
Clay.....	259,395	59,161	386,019	21,869
Cloud.....	199,670	107,613	143,981	38,138
Coffey.....	27,858	482	181,763	4,511
Comanche.....	6,612	63,392	2,121	9,233
Cowley.....	97,494	25,609	99,055	82,443
Crawford.....	51,520	6,100	242,756	10,631
Decatur.....	77,079	121,578	12,015	8,975
Dickinson.....	306,710	105,183	508,834	138,863
Doniphan.....	416,958	26,055	860,740	28,720
Douglas.....	58,102	6,676	260,673	10,834
Edwards.....	41,886	168,857	378,101	10,902
Elk.....	18,660	920	33,001	737
Ellis.....	11,745	151,005	12,113	24,252
Ellsworth.....	70,843	65,639	74,032	34,072
Finney.....	1,965	475	3,940	434
Ford.....	56,386	172,236	23,355	27,877
Franklin.....	44,103	2,230	283,569	4,579
Geary.....	128,835	16,995	196,400	27,533
Gove.....	24,860	59,430	3,541	2,345
Graham.....	171,985	136,658	22,879	14,770
Grant.....	5,418	50	6,245	240
Gray.....	6,004	16,745	6,778	338
Greeley.....	2,498	165	1,310	20
Greenwood.....	60,114	25	172,566	1,816
Hamilton.....	1,165			
Harper.....	114,825	48,990	37,270	148,141
Harvey.....	111,680	47,699	267,244	61,841
Haskell.....	15		175	212
Hodgeman.....	11,905	22,225	2,763	6,990
Jackson.....	215,950	12,517	689,914	13,741
Jefferson.....	143,125	10,904	421,446	7,411
Jewell.....	664,961	37,775	478,398	7,583
Johnson.....	83,361	10,932	279,677	22,015
Kearny.....	755		1,014	564
Kingman.....	50,330	47,976	100,093	82,481
Kiowa.....	80,865	130,447	212,918	12,095
Labette.....	29,992	4,104	136,124	20,290
Lane.....	13,438	44,970	2,305	4,215
Leavenworth.....	29,517	2,820	96,302	6,215
Lincoln.....	123,529	82,399	16,645	22,047
Linn.....	135,746	75	358,824	3,763
Logan.....	14,348	2,840	2,758	131

CORN AND WHEAT ON HAND—CONCLUDED.

COUNTIES.	1917.		1918.	
	Corn bushels.	Wheat bushels.	Corn bushels.	Wheat bushels.
Lyon.....	53,716	728	385,115	9,383
Marion.....	119,564	36,945	422,955	75,716
Marshall.....	855,942	49,075	1,905,322	20,825
McPherson.....	179,739	97,326	347,897	185,309
Meade.....	2,720	28,782	3,255	5,114
Miami.....	118,756	2,440	403,755	11,165
Mitchell.....	233,421	116,326	121,671	39,564
Montgomery.....	22,478	16,211	46,730	34,205
Morris.....	70,044	1,642	236,990	9,375
Morton.....				
Nemaha.....	864,881	20,694	1,300,329	8,954
Neosho.....	62,261	2,475	187,355	4,190
Ness.....	24,353	50,848	11,905	4,473
Norton.....	208,190	37,420	41,955	11,570
Osage.....	30,914	10	366,295	8,533
Osborne.....	197,106	98,174	33,249	16,314
Ottawa.....	118,836	39,160	61,375	19,695
Pawnee.....	17,583	183,435	72,455	23,620
Phillips.....	277,668	56,095	105,325	7,610
Pottawatomie.....	277,355	5,740	551,446	3,661
Pratt.....	81,037	114,430	242,702	106,931
Rawlins.....	46,603	277,196	34,840	54,851
Reno.....	211,080	94,806	543,279	137,232
Republic.....	587,727	87,531	581,789	22,201
Rice.....	130,545	98,289	208,927	76,205
Riley.....	222,673	10,240	318,916	17,033
Rooks.....	85,460	119,371	14,576	12,314
Rush.....	8,933	141,545	11,452	25,778
Russell.....	39,240	144,934	46,436	35,760
Saline.....	181,661	59,018	172,174	51,408
Scott.....	4,925	10,245	2,340	954
Sedgwick.....	110,644	67,991	229,195	95,495
Seward.....	5,940	5,190	2,760	650
Shawnee.....	106,359	3,834	277,981	4,820
Sheridan.....	63,980	73,483	9,209	3,201
Sherman.....	23,450	15,127	25,850	2,825
Smith.....	593,158	65,043	220,022	5,324
Stafford.....	142,273	172,688	743,117	69,262
Stanton.....	1,000		788	
Stevens.....	9,824	2,690	6,045	606
Sumner.....	98,259	58,497	113,954	156,689
Thomas.....	34,586	103,046	375	21,461
Trego.....	28,220	114,025	2,565	8,559
Wabaunsee.....	77,297	6,220	292,785	18,644
Wallace.....	3,560	277	2,010	25
Washington.....	475,134	61,228	1,010,390	17,227
Wichita.....	3,395	25		285
Wilson.....	61,868	2,718	158,001	20,387
Woodson.....	14,100	542	66,941	3,725
Wyandotte.....	9,665	200	69,928	228,828

LIVESTOCK STATISTICS, 1917.

TABLE showing the number and value of various kinds of livestock, in 1917

COUNTIES.	Horses.		Mules and asses.		Milk cows.	
	Number.	Value.	Number.	Value.	Number.	Value.
The State.....	1,048,733	\$125,847,960	271,254	\$36,619,290	580,213	\$43,515,975
Allen.....	10,039	\$1,204,680	2,617	\$353,295	7,780	\$583,500
Anderson.....	9,513	1,141,560	2,310	311,850	7,851	588,825
Atchison.....	7,485	898,200	2,316	312,660	3,329	249,675
Barber.....	9,866	1,183,920	4,122	556,470	3,315	248,625
Barton.....	12,838	1,540,560	5,261	710,235	6,224	466,800
Bourbon.....	11,471	1,376,520	3,329	449,415	8,392	629,400
Brown.....	11,724	1,406,880	3,500	472,500	7,735	580,125
Butler.....	17,360	2,083,200	4,984	672,840	9,209	690,675
Chase.....	5,677	681,240	1,373	185,355	2,023	151,725
Chautauqua.....	10,143	1,217,160	2,984	402,840	4,637	347,775
Cherokee.....	10,569	1,268,280	3,257	439,695	7,638	572,850
Cheyenne.....	8,731	1,047,720	1,364	184,140	3,811	285,825
Clark.....	5,712	685,440	2,743	370,305	1,659	124,425
Clay.....	11,656	1,398,720	2,542	343,170	6,800	510,000
Cloud.....	13,375	1,605,000	3,278	442,530	7,356	551,700
Coffey.....	10,326	1,239,120	2,657	358,695	6,691	501,825
Comanche.....	5,940	712,800	2,832	382,320	1,242	93,150
Cowley.....	16,407	1,968,840	4,300	580,500	11,836	887,700
Crawford.....	12,115	1,453,800	3,470	468,450	8,163	612,600
Decatur.....	10,378	1,245,360	1,783	240,705	5,459	409,425
Dickinson.....	16,281	1,953,720	4,628	624,780	10,369	777,675
Doniphan.....	6,324	758,880	3,274	441,990	4,563	342,225
Douglas.....	11,433	1,371,960	1,724	232,740	8,560	642,090
Edwards.....	7,142	857,040	2,665	359,775	2,361	177,075
Elk.....	7,394	887,280	2,224	300,240	3,833	287,475
Ellis.....	13,973	1,676,760	1,283	173,205	4,751	356,325
Ellsworth.....	10,011	1,201,320	1,983	267,705	3,751	281,325
Finney.....	5,986	718,320	1,841	248,535	2,484	186,300
Ford.....	12,154	1,458,480	3,342	451,170	4,531	339,825
Franklin.....	10,744	1,289,280	2,225	300,375	9,039	677,925
Geary.....	4,769	572,280	1,080	145,800	2,332	174,900
Gove.....	6,443	773,160	1,454	196,290	2,696	202,200
Graham.....	9,692	1,163,040	2,857	385,695	5,280	398,000
Grant.....	2,699	323,880	585	78,975	362	27,150
Gray.....	5,876	705,120	1,886	254,610	2,079	155,925
Greeley.....	2,955	354,600	807	108,945	744	55,800
Greenwood.....	12,117	1,454,040	3,561	480,735	5,240	393,000
Hamilton.....	3,406	408,720	789	106,515	1,280	96,000
Harper.....	11,913	1,429,560	4,123	556,605	4,699	352,425
Harvey.....	10,284	1,234,080	2,243	303,805	5,656	424,200
Haskell.....	2,802	336,240	397	53,595	315	23,625
Hodgeman.....	6,662	799,440	1,356	183,061	2,445	183,375
Jackson.....	11,907	1,428,840	2,615	353,025	8,359	626,925
Jefferson.....	10,565	1,267,800	2,822	380,970	8,793	659,475
Jewell.....	17,470	2,096,400	4,762	642,870	10,495	787,125
Johnson.....	9,311	1,117,320	2,406	324,810	7,480	561,000
Kearny.....	3,637	436,440	836	112,860	1,275	95,625
Kingman.....	11,919	1,430,280	4,548	613,980	6,012	450,900
Kiowa.....	6,822	818,640	3,004	405,540	2,628	197,100
Labette.....	11,898	1,427,760	3,371	455,085	10,288	771,600
Lane.....	5,847	701,640	1,668	225,180	1,168	87,600
Leavenworth.....	7,305	876,600	2,548	343,980	7,668	575,100
Lincoln.....	10,242	1,229,040	2,939	396,765	5,224	391,800
Linn.....	10,009	1,201,080	3,117	420,795	6,687	501,525
Logan.....	6,260	751,200	921	124,335	2,677	200,775

LIVESTOCK STATISTICS, 1917—CONTINUED.

COUNTIES.	Horses.		Mules and asses.		Milk cows.	
	Number.	Value.	Number.	Value.	Number.	Value.
Lyon.....	12,438	\$1,492,560	3,074	\$414,990	6,888	\$516,600
Marion.....	17,525	2,103,000	1,516	204,660	9,095	682,125
Marshall.....	16,507	1,980,840	3,520	475,200	10,455	784,125
McPherson.....	16,553	1,986,360	2,488	335,880	7,493	561,975
Meade.....	7,153	858,360	1,912	258,120	2,909	218,175
Miami.....	10,465	1,255,800	2,557	345,195	9,297	697,275
Mitchell.....	12,783	1,533,960	3,146	424,710	5,603	420,225
Montgomery.....	12,258	1,470,960	3,377	455,895	8,514	638,550
Morris.....	10,281	1,233,720	2,144	289,440	5,159	386,925
Morton.....	3,165	379,800	715	96,525	700	52,500
Nemaha.....	14,343	1,721,160	2,805	378,675	10,921	819,075
Neosho.....	10,552	1,266,240	2,634	355,590	8,058	604,350
Ness.....	9,820	1,178,400	1,730	233,550	3,083	231,225
Norton.....	11,825	1,419,000	3,060	413,100	7,615	571,125
Ossage.....	12,181	1,461,720	2,861	386,235	10,133	759,975
Osborne.....	13,583	1,629,960	3,284	443,340	7,173	537,975
Ottawa.....	10,016	1,201,920	2,460	332,100	5,046	378,450
Pawnee.....	10,855	1,302,600	2,860	386,100	3,699	277,425
Phillips.....	13,830	1,659,600	3,976	536,760	10,353	776,475
Pottawatomie.....	11,348	1,361,760	2,638	356,130	5,691	426,825
Pratt.....	10,095	1,211,400	4,286	578,610	3,798	284,850
Rawlins.....	11,708	1,404,960	1,189	160,515	2,883	216,225
Reno.....	19,499	2,339,880	6,731	908,685	11,797	884,775
Republic.....	14,973	1,796,760	3,530	476,550	8,430	632,250
Rice.....	11,233	1,347,960	4,032	544,320	5,607	420,525
Riley.....	8,394	1,007,280	1,951	263,385	3,478	260,850
Rooks.....	11,257	1,350,840	3,396	458,460	6,274	470,550
Rush.....	10,978	1,317,360	1,560	210,600	4,379	328,425
Russell.....	13,312	1,597,440	1,867	252,045	5,047	378,525
Saline.....	11,022	1,322,640	2,802	378,270	4,866	364,950
Scott.....	5,184	622,080	1,126	152,010	2,421	181,575
Sedgwick.....	17,479	2,097,480	5,022	677,970	12,896	967,200
Seward.....	3,821	458,520	1,446	194,210	1,453	108,975
Shawnee.....	11,562	1,387,440	2,288	308,880	7,822	586,650
Sheridan.....	8,354	1,002,480	2,009	271,215	3,929	294,675
Sherman.....	7,624	914,880	990	133,650	3,716	278,700
Emith.....	16,192	1,943,040	4,187	565,245	10,459	784,425
Stafford.....	9,447	1,133,640	5,192	700,920	4,556	341,700
Stanton.....	2,495	299,400	505	68,175	350	26,250
Stevens.....	3,896	467,520	1,057	142,695	919	68,925
Sumner.....	19,044	2,285,280	5,495	741,825	9,505	712,875
Thomas.....	8,385	1,006,200	1,521	205,335	3,951	296,325
Trego.....	7,696	923,520	1,370	184,950	3,144	235,800
Wabasa.....	8,852	1,062,240	2,557	345,195	5,905	442,875
Wallace.....	5,153	618,360	529	71,415	1,845	138,375
Washington.....	15,117	1,814,040	3,180	429,300	10,856	814,200
Wichita.....	3,655	438,600	459	61,965	893	66,975
Wilson.....	8,734	1,048,080	2,545	343,575	6,214	466,050
Woodson.....	5,534	664,080	1,765	238,275	4,547	341,025
Wyandotte.....	4,980	597,600	1,004	135,540	3,109	233,175

LIVESTOCK STATISTICS, 1917—CONTINUED.

TABLE showing the number and value of various kinds of livestock for the year 1917.

COUNTIES.	Other cattle.		Sheep.		Swine.	
	Number.	Value.	Number.	Value.	Number.	Value.
The State.	2,737,592	\$116,879,600	180,877	\$1,989,647	1,356,703	\$27,812,411.50
Allen.	13,358	\$667,900	2,496	\$27,456	13,210	\$270,805.00
Anderson.	19,010	950,500	1,943	21,373	12,759	261,559.50
Atchison.	15,217	760,850	891	9,801	16,434	336,897.00
Barber.	47,385	2,369,250	2,358	25,938	9,687	198,583.50
Barton.	16,722	836,100	252	2,772	6,641	136,140.50
Bourbon.	18,340	917,000	1,616	17,776	13,677	280,378.50
Brown.	21,994	1,099,700	5,944	65,384	30,796	631,318.00
Butler.	48,080	2,404,000	3,296	36,256	28,510	584,455.00
Chase.	25,155	1,257,750	415	4,565	9,021	184,930.50
Chautauqua.	24,707	1,235,350	288	3,168	6,579	134,869.50
Cherokee.	10,448	522,400	1,716	18,876	10,982	225,131.00
Chevenne.	10,689	534,450	66	726	6,592	135,136.00
Clark.	39,385	1,969,250	46	506	4,632	94,956.00
Clay.	24,989	1,249,450	708	7,788	19,970	409,385.00
Cloud.	19,040	952,000	794	8,734	12,745	261,272.50
Coffey.	21,799	1,089,950	1,365	15,015	13,862	284,171.00
Comanche.	27,866	1,393,300	125	1,375	9,466	194,053.00
Cowley.	42,005	2,100,250	2,801	30,811	22,783	467,051.50
Crawford.	13,521	676,050	2,149	23,639	10,289	210,924.50
Decatur.	16,400	820,000	1,880	20,680	11,576	237,308.00
Dickinson.	39,034	1,951,700	2,949	32,439	27,292	559,486.00
Doniphan.	12,563	628,150	6,236	68,596	23,126	474,083.00
Douglas.	16,843	842,150	2,668	29,348	15,223	312,071.50
Edwards.	10,005	500,250	230	2,530	3,843	78,781.50
Elk.	24,567	1,228,350	597	6,567	11,957	245,118.50
Ellis.	22,714	1,135,700	1,808	19,888	5,549	113,754.50
Ellsworth.	27,359	1,367,950	247	2,717	7,196	147,518.00
Finney.	28,012	1,400,600	1,466	16,126	5,591	114,615.50
Ford.	20,542	1,027,100	185	2,035	6,997	143,438.50
Franklin.	21,606	1,080,300	3,328	36,608	16,909	346,634.50
Geary.	21,699	1,084,950	588	6,468	10,400	213,200.00
Gove.	15,234	761,700	407	4,477	3,160	64,780.00
Graham.	20,406	1,020,300	1,163	12,793	10,706	219,473.00
Grant.	8,046	402,300	115	1,265	676	13,858.00
Gray.	12,579	628,950	7	77	3,575	73,287.50
Greeley.	9,989	499,450	1,045	11,495	281	5,760.50
Greenwood.	46,544	2,327,200	905	9,955	15,420	316,110.00
Hamilton.	17,353	867,650	6,500	71,500	784	16,072.00
Harper.	24,019	1,200,950	247	2,717	11,472	235,176.00
Harvey.	16,790	839,500	3,304	36,344	15,707	321,993.50
Haskell.	7,652	382,600	509	5,599	634	12,997.00
Hodgeman.	22,033	1,101,650	391	4,301	2,734	56,047.00
Jackson.	21,340	1,067,000	1,192	13,112	25,196	516,518.00
Jefferson.	21,696	1,084,800	2,157	23,727	26,985	553,192.50
Jewell.	30,439	1,521,950	1,171	12,881	41,339	847,449.50
Johnson.	13,842	692,100	2,521	27,731	18,842	386,261.00
Kearny.	14,730	736,500	266	2,926	1,824	37,392.00
Kingman.	33,882	1,694,100	505	5,555	10,122	207,501.00
Kiowa.	18,744	937,200	5	55	3,303	67,711.50
Labette.	17,226	861,300	5,030	55,330	14,547	298,213.50
Lane.	11,908	595,400	85	935	2,623	53,771.50
Leavenworth.	13,365	668,250	1,371	15,081	15,000	307,500.00
Lincoln.	35,941	1,797,050	1,319	14,509	10,092	206,886.00
Linn.	16,533	826,650	2,383	26,213	19,082	391,181.00
Logan.	12,934	646,700	5,369	59,059	1,924	39,442.00

LIVESTOCK STATISTICS, 1917—CONCLUDED.

COUNTIES.	Other cattle.		Sheep.		Swine.	
	Number.	Value.	Number.	Value.	Number.	Value.
Lyon.....	35,966	\$1,798,300	13,218	\$145,398	15,655	\$320,927 50
Marion.....	37,445	1,872,250	1,391	15,301	23,312	477,896 00
Marshall.....	34,267	1,713,350	1,787	19,657	39,671	813,255 50
McPherson.....	37,910	1,895,500	2,345	25,795	22,957	470,618 50
Meade.....	23,199	1,159,950	296	3,256	3,904	80,032 00
Miami.....	19,216	960,800	3,796	41,756	26,015	533,307 50
Mitchell.....	24,760	1,238,000	2,147	23,617	15,033	308,176 50
Montgomery.....	16,378	818,900	1,396	15,356	11,619	238,189 50
Morris.....	33,172	1,658,600	1,174	12,914	20,264	415,412 00
Murton.....	11,585	579,250	24	264	673	13,796 50
Nemaha.....	38,291	1,914,550	6,015	66,165	41,784	856,572 00
Neosho.....	14,651	732,550	2,408	26,488	11,985	215,692 50
Ness.....	25,108	1,255,400	114	1,254	4,960	101,630 00
Norton.....	22,602	1,130,100	883	9,713	15,442	316,561 00
Ossage.....	27,754	1,387,700	3,398	37,378	21,534	441,447 00
Osborne.....	35,680	1,784,000	2,173	23,903	13,291	272,465 50
Ottawa.....	28,126	1,406,300	151	1,661	9,493	194,606 50
Pawnee.....	17,119	855,950	1,812	19,932	5,187	106,333 50
Phillips.....	28,337	1,416,850	1,210	13,310	21,181	434,210 50
Pottawatomie.....	41,310	2,065,500	1,301	14,311	24,056	493,148 00
Pratt.....	12,001	600,050	717	7,887	5,911	121,175 50
Rawlins.....	16,421	821,050	1,240	13,640	5,842	119,761 00
Reno.....	37,783	1,889,150	6,914	76,054	25,417	521,048 50
Republic.....	24,965	1,248,250	318	3,493	32,189	659,874 50
Rice.....	20,945	1,047,250	1,327	14,597	14,232	291,756 00
Riley.....	30,493	1,524,650	825	9,075	23,885	489,642 50
Rooks.....	27,996	1,399,800	703	7,733	7,887	161,683 50
Rush.....	14,530	726,500	65	715	4,338	88,929 00
Russell.....	27,075	1,353,750	1,902	20,922	5,784	118,572 00
Saline.....	32,264	1,613,200	11	121	11,425	234,212 50
Scott.....	8,953	447,650	182	2,002	1,821	37,330 50
Sedgwick.....	26,559	1,327,950	5,373	59,103	27,194	557,477 00
Seward.....	10,090	504,500	421	4,631	2,442	50,061 00
Shawnee.....	19,506	975,300	1,623	17,853	16,593	340,156 50
Sheridan.....	14,901	745,050	523	5,753	5,949	121,954 50
Sherman.....	16,274	813,700	36	396	2,222	45,551 00
Smith.....	30,766	1,538,300	1,474	16,214	32,353	663,236 50
Stafford.....	14,730	736,500	1,216	13,376	6,544	134,152 00
Stanton.....	12,597	629,850	248	2,728	404	8,282 00
Stevens.....	8,777	438,850	21	231	2,243	45,981 50
Sumner.....	29,005	1,450,250	6,234	68,574	22,009	451,184 50
Thomas.....	12,991	649,550	1,157	12,727	3,156	64,698 00
Trego.....	21,497	1,074,850	947	10,417	4,216	86,428 00
Wabunsee.....	36,293	1,814,650	4,638	51,018	15,863	325,294 00
Wallace.....	14,875	743,750	259	2,849	2,038	41,779 00
Washington.....	35,812	1,790,600	1,683	18,513	42,130	863,665 00
Wichita.....	10,462	523,100	1,410	15,510	1,087	22,283 50
Wilson.....	15,496	774,800	1,434	15,774	12,105	248,152 50
Woodson.....	14,148	707,400	1,156	12,716	5,627	115,353 50
Wyandotte.....	2,232	111,600	363	3,993	5,454	111,807 00

LIVESTOCK STATISTICS, 1918.

TABLE showing the number and value of various kinds of livestock, in 1918.

COUNTIES.	Horses.		Mules and asses.		Milk cows.	
	Number.	Value.	Number.	Value.	Number.	Value.
The State.....	1,053,000	\$116,883,000	227,745	\$31,884,300	683,211	\$56,023,302
Allen.....	9,552	\$1,060,272	2,176	\$304,640	8,609	\$705,938
Anderson.....	10,138	1,125,318	1,908	267,120	9,905	812,210
Atenison.....	7,567	839,937	1,910	267,400	4,620	378,840
Barber.....	9,643	1,070,373	4,001	560,140	4,076	334,232
Barton.....	12,878	1,429,458	3,283	459,620	7,256	594,992
Bourbon.....	11,572	1,284,492	2,511	351,540	9,597	786,954
Brown.....	11,493	1,275,723	3,516	492,240	9,865	808,930
Butler.....	17,683	1,962,813	3,779	529,060	10,988	901,016
Chase.....	5,747	637,917	1,067	149,380	2,492	204,344
Chautauqua.....	7,397	821,067	1,635	228,900	5,388	441,816
Cherokee.....	10,897	1,209,567	2,939	411,460	8,202	672,564
Cheyenne.....	9,575	1,062,825	1,199	167,860	4,541	372,362
Clark.....	5,661	628,371	2,040	285,600	2,677	219,514
Cay.....	11,463	1,272,393	2,199	307,860	8,859	726,438
Cloud.....	12,708	1,410,588	2,633	368,620	8,875	727,750
Coffey.....	10,800	1,198,800	2,281	319,340	7,944	651,403
Comanche.....	6,225	690,975	2,502	350,280	1,892	155,144
Cowley.....	16,091	1,786,101	3,752	525,280	12,643	1,036,726
Crawford.....	12,023	1,334,553	3,118	436,520	8,129	666,578
Decatur.....	10,961	1,216,671	1,406	196,840	6,382	523,324
Dickinson.....	16,294	1,808,634	2,837	397,180	12,168	997,776
Doniphan.....	6,343	704,073	3,423	479,220	4,728	387,696
Douglas.....	9,983	1,108,668	1,493	209,020	9,314	763,748
Edwards.....	7,228	802,303	2,345	328,300	2,784	228,288
Elk.....	7,594	842,934	1,643	230,720	6,583	539,806
Ellis.....	14,188	1,574,868	1,041	145,740	5,653	463,546
Ellsworth.....	9,928	1,102,008	1,599	223,860	4,801	393,682
Finney.....	6,671	740,481	1,564	218,960	3,365	275,930
Ford.....	12,155	1,350,315	2,573	360,220	5,412	443,784
Franklin.....	10,293	1,143,078	1,755	245,700	10,599	869,118
Geary.....	4,856	539,016	941	131,740	3,321	272,322
Gove.....	7,426	824,286	1,171	163,940	3,089	253,298
Graham.....	9,429	1,046,619	2,537	355,180	5,984	490,688
Grant.....	3,218	357,198	615	86,100	283	23,206
Gray.....	6,069	673,659	1,337	194,180	2,647	217,054
Greeley.....	3,106	344,766	646	90,440	563	46,166
Greenwood.....	12,206	1,354,866	2,726	381,640	6,588	540,216
Hamilton.....	3,787	420,357	696	97,440	924	75,768
Harper.....	11,755	1,304,805	3,904	546,560	5,440	446,080
Harvey.....	9,931	1,102,341	2,255	315,700	6,431	527,342
Haskell.....	3,065	340,215	300	42,000	1,003	82,246
Hodgeman.....	7,009	777,999	1,046	146,440	2,744	225,008
Jackson.....	12,344	1,370,184	2,387	334,180	10,326	846,732
Jefferson.....	10,666	1,183,926	2,614	365,960	9,149	750,218
Jewell.....	17,079	1,895,769	4,083	571,620	11,626	953,332
Johnson.....	8,995	998,445	2,152	301,280	7,458	611,556
Kearny.....	4,053	449,883	619	86,660	1,743	143,336
Kingman.....	11,249	1,248,639	4,085	571,900	7,795	639,190
Kiowa.....	7,187	797,757	2,543	356,020	2,732	224,024
Labette.....	11,969	1,328,559	2,822	395,080	11,385	933,570
Lane.....	5,310	589,410	1,196	167,440	1,940	159,080
Leavenworth.....	7,341	814,851	2,482	347,480	8,878	727,996
Lincoln.....	10,300	1,143,300	2,458	344,120	6,855	562,110
Linn.....	10,031	1,113,441	2,465	345,100	9,511	779,992
Logan.....	6,780	752,580	627	87,780	3,466	284,212

LIVESTOCK STATISTICS, 1918—CONTINUED.

COUNTIES.	Horses.		Mules and asses.		Milk cows.	
	Number.	Value.	Number.	Value.	Number.	Value.
Lyon.....	13,085	\$1,452,435	2,630	\$368,200	9,169	\$751,858
Marion.....	17,494	1,941,834	1,216	170,240	10,550	865,100
Marshall.....	16,681	1,851,591	3,007	420,980	12,345	1,012,290
McPherson.....	16,664	1,849,704	2,109	295,260	9,377	768,914
Meade.....	7,291	809,301	1,766	247,240	4,028	330,296
Miami.....	11,156	1,278,316	2,159	302,260	9,589	786,298
Mitchell.....	12,804	1,421,244	2,615	366,100	6,776	555,632
Montgomery.....	11,764	1,305,804	2,814	393,960	8,715	714,630
Morris.....	9,638	1,069,818	1,666	233,240	7,345	602,290
Morton.....	3,316	371,406	806	112,840	715	58,630
Nemaha.....	14,332	1,590,852	2,262	316,680	11,986	982,852
Neosho.....	10,633	1,180,263	2,230	312,200	9,377	768,914
Ness.....	10,544	1,170,384	1,267	177,380	5,071	415,822
Norton.....	12,102	1,343,322	2,331	326,340	8,868	727,176
Osage.....	12,494	1,386,334	2,103	294,420	10,899	893,718
Osborne.....	13,458	1,493,838	2,417	338,380	8,648	709,136
Ottawa.....	9,813	1,089,243	2,097	293,580	6,440	528,080
Pawnee.....	10,785	1,197,135	2,179	305,060	4,130	338,660
Phillips.....	13,416	1,489,176	3,307	462,980	10,259	841,238
Pottawatomie.....	11,373	1,262,403	2,149	300,860	8,149	663,218
Pratt.....	10,117	1,122,987	4,279	599,060	4,340	355,880
Rawlins.....	12,339	1,369,629	976	136,640	3,995	327,590
Reno.....	19,017	2,110,887	5,972	836,080	13,286	1,089,452
Republic.....	14,554	1,615,494	2,987	418,180	10,435	855,670
Rice.....	11,146	1,237,206	3,705	518,700	6,531	535,542
Riley.....	7,985	886,335	1,679	235,060	4,479	367,278
Rooks.....	12,601	1,398,711	2,753	385,420	7,144	585,808
Rush.....	11,052	1,226,772	1,293	181,720	5,025	412,050
Russell.....	13,220	1,467,420	1,497	209,580	5,873	481,586
Saline.....	11,300	1,254,300	2,163	302,820	5,758	472,156
Scott.....	5,686	631,146	1,006	140,840	2,694	220,908
Sedgwick.....	17,064	1,894,104	4,689	656,460	13,698	1,123,236
Seward.....	4,065	451,215	1,237	173,180	1,391	114,062
Shawnee.....	11,187	1,241,757	2,046	286,440	7,601	623,282
Sheridan.....	8,696	965,256	1,531	214,340	4,799	393,518
Sherman.....	8,187	908,757	891	124,740	4,324	354,568
Smith.....	16,182	1,796,202	3,318	464,520	12,000	984,000
Stafford.....	9,330	1,035,630	4,881	633,340	5,417	444,194
Stanton.....	2,962	328,782	485	67,900	530	43,460
Stevens.....	4,693	520,923	1,128	157,920	1,972	161,704
Sumner.....	18,927	2,100,897	5,262	736,680	10,691	876,662
Thomas.....	8,868	984,348	1,149	160,860	5,104	418,528
Trego.....	7,891	875,901	1,087	152,180	3,954	324,228
Wabunsee.....	8,878	985,458	2,119	296,660	6,312	517,584
Wallace.....	5,840	648,240	464	64,960	2,505	205,410
Washington.....	15,312	1,699,632	2,835	396,900	14,050	1,152,100
Wichita.....	3,907	433,677	251	35,140	1,600	131,200
Wilson.....	8,227	913,197	1,898	265,720	7,433	609,506
Woodson.....	5,528	613,608	1,282	179,480	5,158	422,956
Wyandotte.....	3,434	381,174	857	119,980	2,443	200,326

LIVESTOCK STATISTICS, 1918—CONTINUED.

TABLE showing the number and value of various kinds of livestock for the year 1918.

COUNTIES.	Other cattle.		Sheep.		Swine.	
	Number.	Value.	Number.	Value.	Number.	Value.
The State.....	2,239,717	\$120,944,718	249,928	\$3,124,100.00	1,467,082	\$33,009,345.00
Allen.....	15,449	\$834,246	3,524	\$44,050.00	\$15,499	\$348,727.50
Anderson.....	20,991	1,133,514	2,873	35,912.50	18,367	413,257.50
Atchison.....	12,833	692,982	1,730	21,625.00	18,399	413,977.50
Barber.....	46,693	2,521,422	3,029	37,862.50	9,285	208,912.50
Barton.....	18,115	978,210	1,156	11,450.00	8,564	192,690.00
Bourbon.....	19,254	1,039,716	2,095	26,187.50	16,467	370,507.50
Brown.....	19,460	1,050,840	6,175	77,187.50	35,057	788,782.50
Butler.....	44,961	2,427,894	3,635	45,437.50	26,316	592,110.00
Chase.....	29,187	1,576,098	760	9,500.00	10,183	229,117.50
Chautauqua.....	21,735	1,173,690	539	6,737.50	7,472	163,120.00
Cherokee.....	11,991	647,514	1,677	20,962.50	9,354	210,465.00
Cheyenne.....	11,997	647,838	950	11,875.00	8,315	187,087.50
Clark.....	40,642	2,194,668	58	725.00	3,461	77,872.50
Clay.....	24,490	1,322,460	615	7,637.50	24,762	557,145.00
Cloud.....	17,585	949,590	664	8,300.00	14,330	322,425.00
Coffey.....	24,170	1,305,180	2,581	32,262.50	18,167	408,757.50
Comanche.....	26,803	1,447,362	133	1,662.50	5,440	122,400.00
Cowley.....	46,635	2,518,290	2,433	30,412.50	22,735	511,537.50
Crawford.....	15,043	812,322	2,781	34,762.50	12,605	233,612.50
Decatur.....	15,477	835,758	3,383	42,287.50	7,948	178,830.00
Dickinson.....	38,936	2,102,544	3,923	49,037.50	31,118	700,155.00
Doniphan.....	11,693	631,422	6,510	81,375.00	26,149	588,352.50
Douglas.....	17,178	927,612	3,051	38,175.00	22,015	495,337.50
Edwards.....	10,980	592,920	207	2,587.50	5,242	117,945.00
Elk.....	22,556	1,218,024	766	9,575.00	11,802	265,545.00
Ellis.....	20,341	1,098,414	888	11,100.00	5,890	132,525.00
Ellsworth.....	26,931	1,454,274	291	3,637.50	6,563	147,780.00
Finney.....	27,577	1,489,158	506	6,325.00	4,357	98,032.50
Ford.....	14,645	790,830	525	6,562.50	4,881	109,822.50
Franklin.....	21,224	1,146,096	6,964	87,050.00	20,235	455,287.50
Geary.....	18,463	997,002	673	8,412.50	11,015	247,837.50
Gove.....	14,223	768,042	409	5,112.50	2,148	48,330.00
Graham.....	15,923	859,842	2,039	25,487.50	5,144	115,740.00
Grant.....	11,774	635,796	116	1,450.00	1,040	23,400.00
Gray.....	9,729	525,366	9	112.50	1,686	37,935.00
Greeley.....	11,410	616,140	4,644	58,050.00	304	6,840.00
Greenwood.....	39,352	2,125,008	1,080	13,500.00	16,782	377,595.00
Hamilton.....	14,255	769,770	6,994	87,425.00	438	9,855.00
Harper.....	23,795	1,284,930	840	10,500.00	8,812	198,270.00
Harvey.....	14,491	782,514	5,221	65,262.50	16,117	362,632.50
Haskell.....	5,671	306,234	1,855	23,187.50	498	11,205.00
Hodgeman.....	19,585	1,057,590	925	11,562.50	1,615	37,012.50
Jackson.....	19,339	1,044,306	2,090	26,125.00	27,110	609,975.00
Jefferson.....	18,474	997,596	6,670	83,375.00	29,097	654,682.50
Jewell.....	25,601	1,382,454	1,124	14,050.00	51,005	1,147,612.50
Johnson.....	14,888	803,952	2,961	37,012.50	20,892	470,070.00
Kearny.....	16,913	913,302	62	775.00	2,089	47,002.50
Kingman.....	35,031	1,891,674	1,087	13,587.50	10,572	237,870.00
Kiowa.....	14,213	767,502	14	175.00	4,006	90,135.00
Labette.....	19,130	1,033,020	6,797	84,962.50	16,272	366,120.00
Lane.....	10,640	574,560	100	1,250.00	1,618	37,080.00
Leavenworth.....	11,933	644,382	6,529	81,612.50	18,666	418,635.00
Lincoln.....	29,240	1,578,960	1,695	21,187.50	8,107	182,407.50
Linn.....	16,714	902,556	3,762	47,025.00	18,911	425,497.50
Logan.....	15,308	826,632	4,852	60,650.00	1,315	29,587.50

LIVESTOCK STATISTICS, 1918—CONCLUDED.

COUNTIES.	Other cattle.		Sheep.		Swine.	
	Number.	Value.	Number.	Value.	Number.	Value.
Lyons.....	40,782	\$2,202,228	8,763	\$109,537.50	23,458	\$527,805.00
Marion.....	36,673	1,980,342	3,450	43,125.00	24,782	557,595.00
Marshall.....	31,629	1,707,966	995	12,437.50	41,286	928,935.00
McPherson.....	36,697	1,981,638	5,757	71,962.50	28,780	647,550.00
Meade.....	18,536	1,000,944	351	4,387.50	3,598	80,955.00
Miami.....	19,015	1,026,810	5,889	73,612.50	30,423	694,517.50
Mitchell.....	22,697	1,225,638	4,013	50,162.50	14,265	320,962.50
Montgomery.....	16,432	887,328	1,155	14,437.50	11,672	262,620.00
Morris.....	33,816	1,826,064	1,473	18,412.50	22,969	516,802.50
Morton.....	12,256	661,824	265	3,312.50	788	17,730.00
Nemaha.....	30,944	1,670,976	7,574	94,675.00	50,946	1,146,285.00
Neosho.....	16,198	874,692	3,647	45,587.50	16,058	361,305.00
Ness.....	26,672	1,440,238	252	3,150.00	4,596	103,410.00
Norton.....	19,478	1,051,812	766	9,575.00	10,812	243,270.00
Ossage.....	27,876	1,505,304	6,251	78,137.50	27,631	622,822.50
Osborne.....	31,163	1,683,072	1,807	22,587.50	10,714	241,065.00
Ottawa.....	28,124	1,518,696	91	1,137.50	11,617	261,382.50
Pawnee.....	18,344	990,576	995	12,437.50	5,468	123,030.00
Phillips.....	21,416	1,156,464	2,342	29,275.00	14,680	330,300.00
Pottawatomie.....	37,672	2,034,238	3,672	45,900.00	36,318	817,155.00
Pratt.....	13,314	718,956	768	9,600.00	8,398	188,955.00
Rawlins.....	15,123	816,642	538	6,725.00	5,551	124,897.50
Reno.....	40,175	2,169,450	11,973	149,662.50	25,519	574,177.50
Republic.....	23,543	1,271,322	533	6,662.50	35,104	789,840.00
Rice.....	20,780	1,122,120	2,903	36,287.50	17,762	399,645.00
Riley.....	24,756	1,336,824	981	12,262.50	26,269	591,052.50
Rooks.....	20,327	1,037,658	746	9,325.00	4,969	111,802.50
Rush.....	11,978	646,812	213	2,662.50	3,678	82,755.00
Russell.....	27,060	1,461,240	2,554	31,925.00	6,763	152,280.00
Saline.....	34,233	1,818,582	312	3,900.00	15,065	338,962.50
Scott.....	10,335	558,090	316	3,950.00	1,349	30,752.50
Sedgwick.....	23,224	1,254,096	4,941	61,762.50	27,410	616,725.00
Seward.....	8,651	467,154	305	3,812.50	1,509	33,952.50
Shawnee.....	18,659	1,007,586	2,767	34,587.50	16,598	373,455.00
Sheridan.....	13,117	708,318	945	11,812.50	4,461	100,372.50
Sherman.....	17,155	926,370	134	1,675.00	2,464	55,440.00
Smith.....	23,986	1,295,244	1,324	16,550.00	27,136	610,560.00
Stafford.....	15,301	826,254	1,879	23,487.50	12,017	270,382.50
Stanton.....	13,080	706,320	345	4,312.50	632	13,545.00
Stevens.....	10,290	555,660	105	1,312.50	2,244	50,490.00
Sumner.....	29,899	1,614,546	7,322	91,525.00	23,299	524,227.50
Thomas.....	15,530	838,620	560	7,000.00	2,726	61,335.00
Trego.....	16,469	889,326	2,089	26,112.50	2,134	48,015.00
Wabunsee.....	33,779	1,824,066	3,795	47,437.50	21,775	489,937.50
Wallace.....	11,392	615,168	4,203	51,037.50	814	18,315.00
Washington.....	34,281	1,851,174	2,328	29,100.00	47,948	1,078,830.00
Wichita.....	12,968	700,272	1,600	20,000.00	760	17,100.00
Wilson.....	16,342	882,468	2,044	25,550.00	14,434	324,765.00
Woodson.....	14,198	766,672	6,950	86,875.00	7,170	161,325.00
Wyandotte.....	1,680	90,720	977	12,212.50	3,996	80,910.00

LIVESTOCK STATISTICS, 1917.

TABLE showing the number that have died of disease, the number of sheep killed by dogs and by wolves, and the number of dogs, for the year ending March 1, 1917.

COUNTIES.	Horses.	Mules and asses.	Milk cows.	Other cattle.	Sheep.	Swine.		Sheep killed by dogs.	Sheep killed by wolves.	Number of dogs.
						Cholera.	Other diseases.			
The State.....	19,217	2,000	9,633	37,278	4,638	36,188	23,174	1,264	604	123,344
Allen.....	293	39	163	308	93	123	467	17	27	1,405
Anderson.....	156	17	150	229	13	639	294	.....	3	1,423
Atchison.....	240	30	123	322	126	951	329	.....	2	1,195
Barber.....	277	34	130	533	44	343	127	30	.....	1,057
Barton.....	342	35	104	444	2	46	214	11	.....	1,445
Bourbon.....	310	30	234	497	59	223	180	10	5	1,455
Brown.....	214	16	202	465	102	1,612	383	15	2	1,595
Butler.....	310	27	223	592	122	2,644	219	22	.....	1,347
Chase.....	41	6	12	163	.....	131	122	.....	5	663
Chautauqua.....	156	13	113	254	.....	789	207	1	1	832
Cherokee.....	743	141	258	462	303	152	257	93	.....	1,472
Cheyenne.....	116	20	83	325	3	41	91	.....	.....	601
Clark.....	29	6	.....	183	.....	260	83	.....	3	273
Clay.....	100	17	49	214	2	184	171	.....	.....	1,418
CLOUD.....	188	8	83	366	3	255	129	1	.....	1,421
Coffey.....	184	25	125	196	10	24	355	1	10	1,215
Comanche.....	57	8	13	242	3	219	29	.....	.....	414
Cowley.....	280	22	212	698	91	1,386	571	30	8	2,056
Crawford.....	426	48	210	424	157	500	324	72	57	1,546
Decatur.....	177	12	114	307	101	645	144	36	15	987
Dickinson.....	116	7	91	443	39	206	292	1	.....	1,845
Doniphan.....	96	19	90	200	170	1,162	839	106	17	1,453
Douglas.....	207	16	183	409	159	146	204	20	6	1,975
Edwards.....	111	15	28	120	.....	106	50	.....	.....	423
Elk.....	67	11	61	277	10	865	107	.....	.....	1,042
Ellis.....	533	11	195	791	16	195	371	2	.....	1,483
Ellsworth.....	208	24	65	413	6	104	118	.....	.....	1,124
Finney.....	130	28	43	510	67	288	404	.....	4	495
Ford.....	189	15	60	487	2	163	110	1	.....	1,069
Franklin.....	139	10	93	437	86	584	148	15	17	1,663
Geary.....	31	1	16	171	.....	49	59	.....	.....	641
Gove.....	85	15	34	191	.....	6	43	2	.....	472
Granam.....	153	11	90	352	1	67	381	1	.....	1,042
Grant.....	74	3	6	244	.....	.....	13	1	.....	144
Gray.....	114	14	46	213	1	4	58	1	.....	604
Greeley.....	6	1	1	21	.....	.....	11	.....	.....	172
Greenwood.....	66	6	35	138	.....	280	87	2	.....	1,542
Hamilton.....	30	4	22	279	25	.....	17	1	.....	253
Harper.....	259	31	86	380	6	158	174	3	1	1,575
Harvey.....	175	17	58	227	108	141	197	.....	11	1,312
Haskell.....	60	7	.....	63	.....	.....	79	.....	.....	212
Hodgeman.....	123	6	28	296	.....	26	81	.....	10	471
Jackson.....	188	21	99	455	51	1,351	550	32	6	1,854
Jefferson.....	192	31	173	494	116	443	578	43	1	1,838
Jewell.....	312	30	98	503	9	1,703	653	3	.....	2,130
Johnson.....	283	18	152	322	155	308	114	49	9	986
Kearny.....	14	2	25	234	.....	9	2	.....	.....	187
Kingman.....	209	31	76	473	54	45	73	2	.....	1,182
Kiowa.....	137	25	51	268	.....	110	182	.....	.....	612
Labette.....	302	37	212	463	125	277	304	46	27	1,671
Lane.....	52	12	9	118	.....	5	28	.....	.....	311
Leavenworth.....	151	20	124	291	99	400	195	13	.....	2,070
Lincoln.....	118	5	28	244	51	5	187	.....	.....	1,205
Linn.....	238	41	147	299	165	601	230	22	17	1,335
Logan.....	54	1	39	154	.....	5	22	15	108	509

LIVESTOCK STATISTICS, 1917—CONCLUDED.

COUNTIES.	Horses.	Mules and assos.	Milk cows.	Other cattle.	Sheep.	Swine.		Sheep killed by dogs.	Sheep killed by wolves.	Number of dogs.
						Cholera.	Other diseases.			
Lyon.....	143	11	137	276	22	251	31	18		1,737
Marion.....	293	18	145	684	44	417	448		3	2,250
Marshall.....	175	16	104	446	1	702	378	1	2	2,389
McPherson.....	273	21	71	390	31	282	370	5	1	1,779
Meade.....	191	29	99	415	3	2	101	50	7	530
Miami.....	169	15	125	312	188	427	225	70	18	1,311
Mitchell.....	178	12	85	268	3	110	86	4		1,200
Montgomery..	213	25	198	445	118	99	235	11	48	1,496
Morris.....	172	10	119	669	36	402	463		6	1,140
Morton.....										247
Nemaha.....	209	22	106	524	128	972	715	15		1,880
Neosho.....	311	36	228	493	181	587	358	14	33	1,549
Ness.....	234	24	81	693	13	2	186	1		812
Norton.....	329	44	129	590	17	68	744		1	1,202
Osage.....	284	25	163	613	70	1,426	312	76	6	1,601
Osborne.....	94	9	58	442	79	456	134	18	17	1,421
Ottawa.....	145	13	40	363	10	20	168			875
Pawnee.....	181	12	54	255	65	16	110			633
Phillips.....	132	16	105	339	3	737	410			1,653
Pottawatomie.	103	20	34	640	44	196	443	10		1,799
Pratt.....	173	27	56	155	18	410	94	2		764
Rawlins.....	197	1	72	307	2	222	98	1		902
Reno.....	499	62	211	864	128	643	362	10	1	2,677
Republic.....	140	23	74	310		607	252			2,152
Rice.....	232	25	100	381	8	167	175	51		1,217
Riley.....	76	32	41	444	5	86	1,047	3	1	1,305
Rooks.....	218	19	67	570	1	1	101	2		1,062
Rush.....	240	13	110	463	2	45	154	2	1	965
Russell.....	277	11	117	701	31	106	132	6		1,309
Saline.....	121	9	34	274	32	82	45			1,211
Scott.....	65		44	130			11	2	3	300
Sedgwick.....	313	14	130	353	47	645	225	41	20	2,309
Seward.....	125	24	47	223	30	8	257	4		339
Shawnee.....	151	10	121	267	89	346	248	42		1,977
Sheridan.....	120	8	45	135		74	228			536
Sherman.....	100	3	36	191			24		2	448
Smith.....	267	66	155	637	5	1,819	420	3		2,108
Stafford.....	212	30	59	145	1	58	75		2	1,217
Stanton.....	53	5	3	218	1		41			139
Stevens.....	76	12	20	146	5		65	2		269
Sumner.....	533	34	175	685	174	761	185	46	17	2,163
Thomas.....	170	7	69	274	10	24	41	2		524
Trego.....	140	16	83	474	60	1	71	3	17	486
Wabunsee.....	84	4	63	477	10	132	210	6	21	1,322
Wallace.....	86		20	125		2	8	3		268
Washington...	221	28	140	659	142	1,649	697	3	4	2,506
Wichita.....	65	2	28	181			20			203
Wilson.....	198	17	124	281	9	34	115	2		1,228
Woodson.....	242	13	100	120	17	50	33	3	1	776
Wyandotte...	133	7	33	17		60	166	5		2,331

LIVESTOCK STATISTICS, 1918.

TABLE showing the number that have died of disease, the number of sheep killed by dogs and by wolves, and the number of dogs, for the year ending March 1, 1918.

COUNTIES.	Horses.	Mules and asses.	Milk cows.	Other cattle.	Sheep.	Swine.		Sheep killed by dogs.	Sheep killed by wolves.	Number of dogs.
						Cholera.	Other diseases.			
The State.....	24,368	2,174	14,733	61,769	6,982	41,712	32,306	1,051	926	139,287
Allen.....	198	25	169	564	94	35	353	12	10	1,744
Anderson.....	114	17	122	258	25	84	410	1	.....	1,343
Atchison.....	229	39	204	560	32	419	535	6	6	1,214
Barber.....	301	62	137	957	116	399	168	5	11	1,173
Barton.....	443	42	163	807	19	111	375	2	1	1,328
Bourbon.....	248	27	194	575	91	1,055	392	15	12	1,682
Brown.....	244	30	435	780	313	1,885	501	37	7	2,068
Butler.....	368	27	254	870	178	1,503	580	7	4	2,210
Chase.....	83	2	30	267	24	364	191	.....	35	719
Chautauqua.....	148	10	89	420	.....	97	204	.....	2	1,192
Cherokee.....	353	23	238	472	113	133	263	26	9	1,679
Cheyenne.....	170	14	98	284	1	106	178	1	.....	658
Clark.....	184	34	82	588	10	26	152	1	.....	426
Clay.....	271	17	145	615	20	216	309	.....	.....	1,666
Cloud.....	325	16	128	555	5	863	148	8	.....	1,595
Coffey.....	108	11	65	217	148	3	168	4	1	1,586
Comanche.....	91	12	37	347	1	71	121	.....	.....	461
Cowley.....	355	38	332	983	40	686	624	39	38	2,623
Crawford.....	331	44	244	556	320	248	494	40	60	2,509
Decatur.....	294	15	86	353	36	78	144	2	23	989
Dickinson.....	266	17	216	939	146	385	364	35	4	2,089
Doniphan.....	170	38	139	366	193	2,574	803	21	20	1,420
Douglas.....	190	15	169	485	57	80	299	8	6	1,898
Edwards.....	399	41	102	470	7	5	199	4	.....	568
Elk.....	43	3	47	272	2	29	57	2	4	1,149
Ellis.....	688	18	261	1,121	88	98	570	23	.....	1,461
Ellsworth.....	231	21	75	573	3	267	7	.....	2	1,272
Finney.....	128	12	57	748	2	18	189	.....	.....	573
Ford.....	350	34	138	678	10	22	189	4	.....	1,137
Franklin.....	171	9	174	534	230	604	272	27	88	1,687
Geary.....	81	4	53	479	49	439	221	2	.....	863
Gove.....	128	17	97	245	6	.....	74	.....	.....	574
Graham.....	331	29	209	539	2	30	298	8	2	973
Grant.....	98	1	5	433	.....	5	74	.....	.....	174
Gray.....	255	28	96	284	3	33	115	.....	.....	538
Greeley.....	7	.....	.....	46	1,145	.....	.....	2	2	154
Greenwood.....	57	4	52	321	4	4	106	.....	.....	1,630
Hamilton.....	33	2	8	458	35	8	13	.....	.....	283
Harper.....	330	45	153	756	22	279	240	.....	.....	1,527
Harvey.....	254	20	163	588	97	382	459	28	8	1,272
Haskell.....	27	2	4	24	4	6	9	.....	.....	82
Hodgeman.....	153	12	76	338	.....	35	52	.....	.....	492
Jackson.....	143	21	228	716	53	3,323	489	7	4	1,734
Jefferson.....	238	21	239	721	140	1,253	624	33	3	1,924
Jewell.....	531	31	186	1,056	69	699	1,694	11	.....	2,099
Johnson.....	285	33	192	478	191	1,118	552	49	25	1,651
Kearny.....	14	2	6	249	.....	.....	54	.....	.....	290
Kingman.....	377	47	267	1,208	124	5	297	.....	2	1,311
Kiowa.....	356	23	67	450	1	11	153	.....	.....	589
Labette.....	238	41	219	648	109	169	135	35	103	2,285
Lane.....	57	9	10	198	.....	21	23	.....	.....	349
Lavenworth.....	181	23	184	338	74	1,772	378	3	2	2,529
Lincoln.....	147	9	72	429	47	698	295	1	25	1,092
Linn.....	67	12	103	253	39	87	99	13	23	1,614
Logan.....	57	2	29	293	114	.....	10	.....	.....	483

LIVESTOCK STATISTICS, 1918—CONCLUDED.

COUNTIES.	Horses.	Mules and asses.	Milk cows.	Other cattle.	Sheep.	Swine.		Sheep killed by dogs.	Sheep killed by wolves.	Number of dogs.
						Cholera.	Other diseases.			
Lyon.....	225	14	181	612	46	373	488	9	24	1,806
Marion.....	462	18	315	1,818	125	1,011	733	7	25	2,360
Marshall.....	226	37	331	1,148	2	384	643	5	.....	2,495
McPherson.....	317	21	123	854	31	233	358	14	2	1,855
Meade.....	281	19	144	666	11	63	155	4	3	654
Miami.....	181	23	247	661	204	363	393	49	21	1,514
Mitchell.....	194	8	75	435	.....	474	156	8	.....	1,659
Montgomery.....	232	15	205	573	48	1,132	321	21	38	2,495
Morris.....	132	12	125	735	48	1,267	593	4	3	1,388
Morton.....	82	7	.....	171	.....	.....	4	.....	.....	261
Nemaha.....	245	20	244	1,134	237	4,435	1,303	67	39	2,155
Neosho.....	186	22	213	689	78	119	277	21	7	1,662
Ness.....	306	23	153	922	32	2	234	3	3	1,882
Norton.....	361	15	162	580	8	188	540	2	.....	1,255
Osage.....	271	25	266	916	100	799	559	35	48	1,877
Osborne.....	150	9	73	574	33	41	247	7	.....	1,433
Ottawa.....	209	14	53	629	6	65	123	1	.....	1,105
Pawnee.....	545	28	171	592	11	9	206	.....	1	718
Phillips.....	246	15	145	363	126	759	355	5	.....	1,788
Pottawatomie.....	134	19	176	916	30	63	486	1	.....	1,723
Pratt.....	316	52	144	463	6	215	267	.....	.....	999
Rawlins.....	256	7	86	327	26	2	128	.....	.....	912
Reno.....	828	74	526	1,814	252	740	974	32	22	2,552
Republic.....	437	26	187	1,195	13	1,221	448	7	20	2,147
Rice.....	301	37	109	714	127	217	431	10	2	1,321
Riley.....	71	7	64	739	30	295	925	.....	5	1,076
Rooks.....	281	22	149	617	.....	7	104	9	.....	1,071
Rush.....	384	11	161	688	13	71	146	14	.....	1,057
Russell.....	447	13	148	1,074	100	4	426	13	3	1,267
Saline.....	202	20	81	571	.....	805	244	8	.....	1,638
Scott.....	61	5	36	136	.....	11	27	.....	15	397
Sedgwick.....	492	65	461	1,132	168	1,303	716	2	20	3,978
Seward.....	144	18	42	439	5	.....	82	.....	1	437
Shawnee.....	200	23	105	380	22	277	290	9	10	1,838
Sheridan.....	127	11	49	209	5	.....	39	.....	.....	605
Sherman.....	94	14	55	314	1	6	18	5	.....	500
Smith.....	327	30	137	628	21	480	643	.....	1	2,040
Stafford.....	439	58	176	555	18	21	166	.....	.....	1,416
Stanton.....	55	3	9	357	.....	9	42	13	1	139
Stevens.....	183	28	94	417	.....	2	59	.....	.....	323
Sumner.....	655	38	347	1,209	225	345	587	42	29	2,789
Thomas.....	127	12	61	232	5	11	34	.....	.....	599
Trego.....	203	9	57	488	25	7	96	19	9	823
Wabaussee.....	78	4	75	717	3	188	193	2	10	1,464
Wallace.....	108	6	45	295	3	6	35	.....	.....	214
Washington.....	251	14	297	1,550	43	560	877	15	3	2,627
Wichita.....	61	2	9	186	.....	.....	33	1	.....	207
Wilson.....	170	28	162	338	14	145	252	5	18	1,893
Woodson.....	87	11	80	179	27	3	76	10	1	871
Wyandotte.....	59	11	31	56	2	140	51	.....	.....	2,371

PRODUCTS OF LIVESTOCK, 1917.

TABLE showing value of various products of livestock for the year ending March 1, 1917.

COUNTIES.	Animals slaughtered or sold for slaughter.	Poultry and eggs sold.	Wool clip, 1916.	
			Pounds.	Value.
The State.....	\$81,596,288	\$14,159,909	360,857	\$101,039.96
Allen.....	\$413,823	\$163,820	10,091	\$2,825.48
Anderson.....	655,472	153,904	3,851	1,078.28
Atchison.....	784,616	139,833	3,936	1,116.08
Barber.....	506,214	78,786	2,393	670.04
Barton.....	337,327	145,778	228	63.84
Bourbon.....	661,068	177,720	3,669	1,027.32
Brown.....	1,612,711	208,878	10,660	2,984.80
Butler.....	3,218,416	245,602	8,378	2,345.84
Chase.....	1,968,153	81,065	1,448	405.44
Chautauqua.....	638,151	65,231	512	143.36
Cherokee.....	288,749	116,379	5,620	1,573.60
Cheyenne.....	274,615	55,540	450	126.00
Clark.....	219,625	25,046	150	42.00
Clay.....	1,068,994	216,969	950	266.00
Cloud.....	672,019	196,087	65	18.20
Coffey.....	678,723	190,980	3,183	891.24
Comanche.....	533,110	40,864	129	36.12
Cowley.....	1,826,911	193,359	5,301	1,484.28
Crawford.....	368,651	156,697	8,031	2,248.68
Decatur.....	479,098	121,656	1,674	468.72
Dickinson.....	1,404,559	300,483	5,670	1,587.60
Doniphan.....	1,278,759	108,076	8,803	2,464.84
Douglas.....	656,489	163,469	11,880	3,326.40
Edwards.....	191,510	60,342	.....	.....
Elk.....	1,033,829	117,409	493	138.04
Ellis.....	306,877	81,722	138	38.64
Ellsworth.....	1,164,100	123,930	567	158.76
Finney.....	569,053	31,282	4,800	1,344.00
Ford.....	253,099	94,392	.....	.....
Franklin.....	979,367	224,414	15,822	4,430.16
Geary.....	740,303	73,630	2,111	591.08
Gove.....	133,857	48,292	1,056	295.68
Graham.....	525,245	111,152	1,620	453.60
Grant.....	21,248	10,282	32	8.96
Gray.....	165,606	34,726	.....	.....
Greeley.....	27,008	5,399	.....	.....
Greenwood.....	2,477,193	149,361	1,115	312.20
Hamilton.....	29,791	7,710	27,071	7,579.88
Harper.....	416,242	130,473	1,705	477.40
Harvey.....	749,630	186,929	10,000	2,800.00
Haskell.....	43,695	13,105	.....	.....
Hodgeman.....	134,060	49,567	4,830	1,352.40
Jackson.....	1,194,686	207,276	3,140	879.20
Jefferson.....	1,230,475	220,925	8,181	2,290.68
Jewell.....	1,866,145	325,049	1,210	338.80
Johnson.....	701,663	154,874	5,987	1,676.36
Kearny.....	126,811	11,954	125	35.00
Kingman.....	765,265	120,091	250	70.00
Kiowa.....	273,098	53,258	.....	.....
Labette.....	624,515	189,829	8,491	2,377.48
Lane.....	103,626	36,613	361	101.08
Leavenworth.....	581,924	132,569	2,725	763.00
Lincoln.....	1,264,623	195,428	4,300	1,204.00
Linn.....	675,583	181,181	8,150	2,282.00
Logan.....	141,363	30,275	4,700	1,316.00

PRODUCTS OF LIVESTOCK, 1917—CONCLUDED.

COUNTIES.	Animals slaughtered or sold for slaughter.	Poultry and eggs sold.	Wool clip, 1916.	
			Pounds.	Value.
Lyon.....	\$1,820,550	\$246,171	3,033	\$849.24
Marion.....	2,100,977	276,985	4,936	1,382.08
Marshall.....	1,811,985	307,723	345	96.60
McPherson.....	1,725,173	295,713	2,915	816.20
Meade.....	271,540	45,885	2,640	739.20
Miami.....	932,892	241,915	10,916	3,056.48
Mitchell.....	891,477	207,698	32	8.96
Montgomery.....	424,579	130,848	1,759	492.52
Morris.....	1,843,647	146,411	1,915	536.20
Morton.....	40,855	5,918		
Nemaha.....	1,974,640	302,448	9,653	2,702.84
Neosho.....	547,927	193,411	7,388	2,068.64
Ness.....	293,230	81,832	630	176.40
Norton.....	894,830	150,345	600	161.00
Osage.....	1,207,287	224,961	8,409	2,354.52
Osborne.....	885,654	181,436	4,790	1,341.20
Ottawa.....	1,377,368	171,568	32	8.96
Pawnee.....	282,525	89,423	1,244	348.32
Phillips.....	995,823	202,321	520	145.60
Pottawatomie.....	2,043,733	210,970	578	161.84
Pratt.....	286,961	96,844		
Rawlins.....	226,475	76,931	518	145.04
Reno.....	956,116	263,830	8,165	2,286.20
Republic.....	1,479,971	250,338	775	217.00
Rice.....	841,602	158,931	770	215.60
Riley.....	1,532,747	169,465	1,935	541.80
Rooks.....	479,081	148,605	1,750	490.00
Rush.....	142,924	96,539	10	2.80
Russell.....	334,454	136,456	2,640	739.20
Saline.....	1,109,632	190,092		
Scott.....	51,371	24,800	2,851	798.28
Sedgwick.....	1,537,102	263,174	4,539	1,270.92
Seward.....	141,777	20,063	620	173.60
Shawnee.....	806,266	178,603	6,202	1,736.56
Sheridan.....	339,608	71,242	1,930	540.40
Sherman.....	139,654	31,254	12	3.36
Smith.....	1,758,389	254,216	4,653	1,302.84
Stafford.....	243,373	107,208	2,899	811.72
Stanton.....	25,437	5,928		
Stevens.....	49,396	12,374		
Sumner.....	1,070,337	232,944	10,485	2,935.80
Thomas.....	136,610	42,273	440	123.20
Trego.....	231,560	55,319		
Wabunsee.....	2,294,887	186,480	3,989	1,116.92
Wallace.....	113,489	14,192	150	42.00
Washington.....	1,765,804	311,131	1,802	504.56
Wichita.....	74,355	16,082	18,000	5,040.00
Wilson.....	520,386	138,909	3,786	1,060.08
Woodson.....	380,786	98,941	3,499	979.72
Wyandotte.....	94,213	33,087		

PRODUCTS OF LIVESTOCK, 1918.

TABLE showing value of various products of livestock for the year ending March 1, 1918.

COUNTIES.	Animals slaughtered or sold for slaughter.	Poultry and eggs sold.	Wool clip, 1917.	
			Pounds.	Value.
The State.....	\$108,073,032	\$14,792,380	453,168	\$244,710.72
Allen.....	\$621,763	\$184,951	13,076	\$7,061.04
Anderson.....	964,351	175,762	7,875	4,252.50
Atchison.....	1,138,480	135,251	3,466	1,871.64
Barber.....	976,731	77,774	4,195	2,265.30
Barton.....	450,444	144,138	250	135.00
Bourbon.....	887,522	189,725	5,175	2,794.50
Brown.....	2,401,943	197,876	31,064	16,774.56
Butler.....	3,594,985	249,674	7,427	4,010.58
Chase.....	2,432,558	77,359	2,060	1,112.40
Chautauqua.....	883,806	75,900	898	484.92
Cherokee.....	393,341	124,100	4,306	2,325.24
Cheyenne.....	356,864	63,050	44	23.76
Clark.....	635,439	26,805	100	54.00
Clay.....	1,574,774	250,328	4,692	2,533.68
Cloud.....	967,811	212,610	967	522.18
Coffey.....	1,075,445	199,119	4,106	2,217.24
Comanche.....	541,413	37,715		
Cowley.....	2,146,082	201,940	4,731	2,554.74
Crawford.....	580,844	178,184	9,423	5,088.42
Decatur.....	464,640	124,457	6,114	3,301.56
Dickinson.....	2,023,282	324,188	16,091	8,689.14
Doniphan.....	2,283,015	109,174	13,656	7,374.24
Douglas.....	1,010,299	197,424	9,201	4,968.54
Edwards.....	208,399	56,788		
Elk.....	1,508,524	114,294	2,275	1,228.50
Ellis.....	350,264	81,303	9,024	4,872.96
Ellsworth.....	1,480,919	124,541	1,200	648.00
Finney.....	585,575	32,405	1,840	993.60
Ford.....	315,633	79,287	190	102.60
Franklin.....	1,228,419	231,468	7,671	4,142.34
Geary.....	1,141,015	82,177	1,730	934.20
Gove.....	163,426	52,884	1,500	810.00
Graham.....	504,631	88,586	2,419	1,306.26
Grant.....	110,678	5,127		
Gray.....	129,629	29,103		
Greeley.....	37,465	7,314	15,200	8,208.00
Greenwood.....	2,419,665	139,309	1,848	997.92
Hamilton.....	28,229	8,908	20,300	10,962.00
Harper.....	527,182	121,069	823	444.42
Harvey.....	1,033,784	188,120	10,628	5,739.12
Haskell.....	81,235	8,897		
Hodgeman.....	228,544	45,614	1,478	798.12
Jackson.....	1,582,837	219,266	4,424	2,388.96
Jefferson.....	1,953,082	223,222	10,005	5,402.70
Jewell.....	2,231,042	339,885	1,638	884.52
Johnson.....	1,108,085	143,813	5,486	2,962.44
Kearny.....	158,108	13,142	50	27.00
Kingman.....	776,432	115,976	595	321.30
Kiowa.....	325,747	47,974		
Labette.....	784,643	199,785	9,305	5,024.70
Lane.....	103,539	34,211		
Leaerworth.....	905,153	133,588	2,361	1,274.94
Lincoln.....	1,364,931	184,944	9,060	4,892.40
Linn.....	971,558	209,027	7,365	3,977.10
Logan.....	200,200	26,597	1,300	702.00

PRODUCTS OF LIVESTOCK, 1918—CONCLUDED.

COUNTIES.	Animals slaughtered or sold for slaughter.	Poultry and eggs sold.	Wool clip, 1917.	
			Pounds.	Value.
Lyon.....	\$2,672,295	\$274,491	4,336	\$2,341.44
Marion.....	2,458,344	295,476	3,744	2,021.76
Marshall.....	2,453,373	373,536	160	86.40
McPherson.....	2,355,633	337,949	3,800	2,052.00
Meade.....	236,061	44,324	1,610	869.40
Miami.....	1,373,076	258,692	15,141	8,176.14
Mitchell.....	904,514	195,229	92	49.63
Montgomery.....	513,385	143,283	4,471	2,414.34
Morris.....	3,084,504	155,176	3,838	2,072.52
Morton.....	94,457	7,252	.....	.....
Nemaha.....	3,371,527	343,119	21,744	11,741.76
Neosho.....	705,449	223,120	9,346	5,046.84
Ness.....	280,650	87,586	400	216.00
Norton.....	674,155	143,357	125	67.50
Osage.....	1,960,913	269,663	11,303	6,104.70
Osborne.....	934,067	163,010	6,105	3,296.70
Ottawa.....	1,423,807	173,817	55	29.70
Pawnee.....	285,633	81,721	5,030	2,716.20
Phillips.....	1,047,859	187,754	4,361	2,354.94
Pottawatomie.....	2,856,477	244,302	753	409.32
Pratt.....	377,192	95,621	.....	.....
Rawlins.....	341,725	81,451	633	344.52
Reno.....	1,413,237	263,845	9,399	5,075.46
Republic.....	2,155,470	239,834	1,846	996.84
Rice.....	1,382,673	173,705	1,193	644.22
Riley.....	2,100,852	189,094	388	209.52
Rooks.....	472,765	126,260	105	56.70
Rush.....	174,326	97,953	42	22.63
Russell.....	349,242	139,239	4,195	2,265.30
Saline.....	1,517,522	201,627	20	10.50
Scott.....	62,748	23,214	720	383.80
Sedgwick.....	1,734,441	263,030	6,029	3,255.66
Seward.....	111,479	13,427	.....	.....
Shawnee.....	1,010,063	171,351	7,862	4,245.43
Sheridan.....	347,853	69,743	2,422	1,307.83
Sherman.....	213,803	37,871	.....	.....
Smith.....	1,783,680	241,733	3,515	1,893.10
Stafford.....	386,516	109,593	1,553	841.32
Stanton.....	21,853	6,450	.....	.....
Stevens.....	115,741	12,243	.....	.....
Sumner.....	1,500,542	239,713	12,250	6,615.00
Thomas.....	193,597	42,810	1,910	1,031.40
Trego.....	223,223	63,813	3,650	1,971.00
Wabasa.....	3,161,067	196,262	3,715	2,006.10
Wallace.....	221,445	13,161	24	12.96
Washington.....	2,772,231	355,975	2,346	1,266.84
Wichita.....	35,643	15,302	6,000	3,240.00
Wilson.....	665,890	150,703	3,950	2,133.00
Woodson.....	454,172	97,265	4,002	2,161.08
Wyandotte.....	103,510	21,087	336	181.44

DAIRY PRODUCTS, 1917.

TABLE showing the number of pounds and value of cheese and butter made in families and factories, value of milk sold, and pounds and value of condensed milk,* year ending March 1, 1917.

COUNTIES.	Cheese.		Butter.		Milk sold for butter and cheese.	Milk sold other than for butter and cheese.
	Pounds.	Value.	Pounds.	Value.		
The State.....	49,605	\$8,461 85	43,813,454	\$13,923,874.65	\$8,644,715	\$1,654,962
Allen.....	30	\$5. 10	649,605	\$207,482.55	\$94,163	\$12,046
Anderson.....	50	10.50	257,070	80,018.70	127,952	4,376
Atchison.....			535,823	172,191.84	106,684	1,276
Barber.....	110	18.70	118,030	35,709.00	25,450	15,535
Barton.....	120	20.40	1,406,837	460,055.73	68,834	17,620
Bourbon.....	370	62.90	371,203	115,514.19	89,917	38,104
Brown.....			282,009	85,020.12	120,540	38,035
Butler.....	100	17.00	328,174	98,452.20	208,937	3,148
Chase.....			112,462	33,738.60	35,110	995
Chautauqua.....	360	61.20	104,592	31,377.60	47,917	1,238
C Cherokee.....			351,736	105,520.80	50,417	13,465
Cheyenne.....	945	160.65	64,961	19,488.30	36,419	
Clark.....	25	4.25	23,800	7,140.00	19,451	994
Clay.....	80	13.60	273,614	82,084.20	97,180	22,393
Cloud.....	7,460	1,268.20	2,106,813	688,488.75	118,125	6,800
Coffey.....	4,015	682.55	205,540	61,662.00	93,997	6,100
Comanche.....	200	34.00	65,265	19,579.50	12,435	2,105
Cowey.....	4,485	762.45	3,119,811	1,019,952.78	213,694	5,575
Crawford.....	140	23.80	372,182	116,131.29	42,244	14,290
Decatur.....	160	27.20	115,483	34,644.90	77,972	4,105
Dickinson.....	160	27.20	2,086,466	681,340.53	187,117	44,192
Doniphan.....			152,981	45,894.30	36,486	1,755
Douglas.....	25	4.25	347,245	106,192.14	193,155	23,373
Edwards.....	200	34.00	93,063	27,918.90	25,123	
Elk.....			349,929	110,886.24	91,080	6,330
Ellis.....	195	33.15	93,593	28,137.90	38,743	13,942
Ellsworth.....	10	1.70	157,816	47,344.80	47,774	15,840
Finney.....			102,412	31,323.60	14,942	18,204
Ford.....	300	51.00	141,508	42,452.40	42,617	31,104
Franklin.....	50	8.50	1,145,532	372,526.50	170,429	26,510
Geary.....			100,729	30,218.70	30,734	8,535
Gove.....			49,811	14,943.30	35,134	650
Graham.....	10	1.70	146,161	43,848.30	62,947	245
Grant.....			7,018	2,105.40	2,850	
Gray.....			33,203	9,960.90	19,032	945
Greeley.....			12,479	3,743.70	11,625	741
Greenwood.....	100	17.00	211,996	63,598.80	75,925	8,419
Hamilton.....			22,284	6,685.20	12,572	3,599
Harper.....	960	163.20	268,592	83,061.03	65,729	5,266
Harvey.....	660	112.20	419,048	129,744.60	87,611	26,414
Haskell.....			21,460	6,438.00	1,575	
Hodgeman.....			44,726	13,417.80	40,357	223
Jackson.....	158	26.86	217,737	65,321.10	154,576	2,605
Jefferson.....			215,338	64,601.40	183,515	4,132
Jewell.....			297,905	89,371.50	160,618	5,891
Johnson.....	270	45.90	243,398	73,511.25	94,592	240,750
Kearny.....			28,475	8,542.50	29,688	619
Kingman.....			191,030	57,629.94	96,586	
Kiowa.....	100	17.00	104,705	31,411.50	16,661	8,263
Labette.....	115	19.55	2,406,720	785,711.73	172,034	32,148
Lane.....			32,028	9,608.40	24,036	675
Leavenworth.....	3,006	511.02	191,285	58,495.50	174,905	56,180
Lincoln.....			205,899	61,769.70	88,739	4,855
Linn.....			163,260	48,978.00	68,184	9,995
Logan.....	50	8.50	23,558	7,067.40	43,128	415

DAIRY PRODUCTS, 1917—CONCLUDED.

COUNTIES.	Cheese.		Butter.		Milk sold for butter and cheese.	Milk sold other than for butter and cheese.
	Pounds.	Value.	Pounds.	Value.		
Lyon			276,444	\$83,167.20	\$93,787	\$45,987
Marion	300	\$51.00	407,440	127,632.00	142,952	7,290
Marshall	1,325	225.25	389,587	116,876.10	165,171	43,659
McPherson	890	151.30	394,860	120,945.00	117,222	13,875
Meade			71,728	21,518.40	28,377	4,507
Miami			347,381	106,629.30	112,883	23,721
Mitlenell			239,004	71,701.20	35,898	14,805
Montgomery			649,846	200,904.18	68,226	31,686
Morris	300	51.00	956,555	310,306.50	108,261	2,884
Morton			16,607	4,982.10	3,439	.....
Nemaha	3,345	568.65	286,020	85,806.00	196,666	3,268
Neosho	300	51.00	216,491	65,297.70	86.8 2	41,606
Ness	220	37.40	69,324	20,797.20	50,566	2,615
Norton	150	25.50	215,515	65,854.50	107,816	2,807
Osage			243,435	73,270.50	166,151	9,587
Osborne			243,124	72,937.20	121,265	19,014
Ottawa			227,140	68,142.00	82,151	3,190
Pawnee	450	76.50	170,813	51,243.90	26,480	8,824
Phillips	200	34.00	227,950	68,385.00	145,173	5,795
Pottawatomie	215	36.55	229,031	68,709.30	107,639	4,850
Pratt	150	25.50	202,019	61,325.70	46,665	2,010
Rawlins	100	17.00	88,019	26,405.70	42,970	220
Reno	1,080	213.60	1,999,731	647,931.45	206,200	34,826
Republic	200	34.00	343,080	107,179.89	109,299	16,707
Rice			272,785	82,135.50	85,100	3,807
Riley	400	68.00	161,572	48,471.60	77,773	15,948
Rooks	1,850	314.50	172,273	51,681.90	99,455	1,970
Rush	65	11.05	64,385	19,315.50	54,999	2,413
Russell			114,012	34,203.60	75,073	6,363
Saline	90	15.30	276,929	84,776.49	80,486	14,908
Scott	106	18.02	42,051	12,615.30	31,854	2,610
Sedgwick			1,429,649	459,079.62	266,493	106,001
Seward			151,280	48,642.15	14,294	230
Shawnee	10	1 70	8,996,433	2,961,633.36	180,000	101,837
Sheridan			70,277	21,083.10	49,681	8,810
Sherman			44,200	13,260.00	43,937	8,418
Smith	30	5.10	310,264	93,079.20	164,838	3,925
Stafford			170,908	51,272.40	29,997	11,267
Stanton			13,211	3,963.30	2,210	30
Stevens	20	3.40	26,791	8,037.30	7,868	125
Sumner	100	17.00	379,503	114,024.90	173,684	31,519
Thomas			49,073	14,721.90	40,679	.....
Trego			64,874	19,462.20	23,314	16,145
Wabunsee			210,701	63,210.30	110,223	1,332
Wallace			12,335	3,700.50	22,716	.....
Washington	4,790	814.30	326,346	98,743.80	220,906	13,364
Wichita			23,721	7,116.30	23,648	1,170
Wilson			334,383	102,384.90	46,781	22,990
Woodson			149,464	44,843.70	34,306	7,564
Wyandotte	7,900	1,343.00	240,490	76,411.80	24,034	119,250

*Condensed milk, 10,749,603 pounds, value \$614,976.30 of which Dickinson county reported 109,163 pounds value \$6,549.78; Franklin county 1,825,000 pounds, value \$109,500.00; Jefferson county 50,242 pounds, value \$4,814.52; Leavenworth county 1,150,330 pounds, value \$69,019.80; and Sumner county 7,584,870 pounds, value \$455,092.20.

DAIRY PRODUCTS, 1918.

TABLE showing the number of pounds and value of cheese and butter made in families and factories, value of milk sold, and pounds and value of condensed milk.* year ending March 1, 1918.

COUNTIES.	Cheese.		Butter.		Milk sold for butter and cheese.	Milk sold other than for butter and cheese.
	Pounds.	Value.	Pounds.	Value.		
The State.....	30,264	\$5,417.52	48,197,142	\$19,767,074.52	\$13,289,390	\$1,820,454
Allen.....	25	\$4.50	1,104,471	\$457,156.44	\$149,230	\$12,730
Anderson.....	725	130.50	224,834	89,952.30	206,488	6,370
Atchison.....			624,326	257,823.18	119,298	8,927
Barber.....			89,719	34,990.41	52,186	6,490
Barton.....	11	1.98	1,560,814	652,183.14	107,793	13,666
Bourbon.....			482,908	197,076.66	203,509	23,830
Brown.....			233,780	91,364.61	173,036	24,745
Butler.....			282,124	110,028.36	263,938	54,263
Chase.....			83,370	32,514.30	45,170	3,726
Chautauqua.....	240	43.20	125,869	49,088.91	60,621	5,152
Cherokee.....	15	2.70	296,105	115,480.95	103,062	17,214
Cheyenne.....	35	6.30	63,984	24,953.76	47,446	4,797
Clark.....	30	5.40	30,103	11,740.17	32,371	3,651
Clay.....	30	5.40	600,367	244,691.40	206,778	19,615
CLOUD.....	7,245	1,304.10	2,264,412	945,370.68	184,425	19,558
Coffey.....			203,166	79,234.74	160,813	8,888
Comanche.....			64,085	24,993.15	21,366	592
Cowley.....	960	172.80	4,239,578	1,772,396.25	287,037	23,954
Crawford.....	20	3.60	353,005	141,690.98	68,282	16,225
Decatur.....	220	3,960	107,721	42,011.19	120,910	2,616
Dickinson.....	50	\$ 0.00	2,482,059	1,036,568.16	359,152	21,187
Doniphan.....			152,253	59,378.67	32,636	9,478
Douglas.....			268,438	106,637.10	267,805	14,721
Edwards.....			80,486	31,389.54	32,752	80
Elk.....			264,524	119,642.46	118,765	8,068
Ellis.....			67,094	37,866.66	67,714	8,924
Ellsworth.....			133,370	52,014.30	108,098	7,763
Finney.....			68,121	26,567.19	42,690	7,170
Ford.....	102	18.36	171,125	67,648.57	65,615	10,210
Franklin.....			2,358,512	986,646.84	256,639	21,800
Geary.....			95,303	37,168.17	46,451	12,446
Gove.....			41,891	16,338.66	58,917	10
Graham.....	501	\$0.18	119,781	46,714.59	87,124	2,289
Grant.....			11,665	4,666.35	9,425	1,344
Gray.....			30,568	11,921.52	38,817	75
Greeley.....			14,054	5,481.06	18,888	1,090
Greenwood.....	124	22.32	175,622	68,492.58	114,762	7,703
Hamilton.....			21,803	8,503.17	19,153	3,983
Harper.....			161,834	63,984.15	85,484	11,475
Harvey.....	687	123.66	506,109	204,707.40	155,475	26,640
Haskell.....			12,953	5,051.67	14,124	60
Hodgeman.....			59,723	23,291.97	65,317	
Jackson.....			202,572	79,003.08	163,227	5,527
Jefferson.....			203,065	79,207.05	213,671	7,356
Jewell.....			284,807	111,074.73	261,966	5,408
Johnson.....			202,477	79,556.07	171,248	189,186
Kearny.....			22,182	8,650.98	36,489	1,230
Kingman.....			157,482	61,655.34	153,634	6,948
Kiowa.....	300	54.00	112,306	43,799.34	24,033	8,714
Labette.....			2,380,804	992,708.13	219,805	37,809
Lane.....			35,557	13,867.23	42,022	355
Leavenworth.....			353,378	143,817.42	315,427	20,876
Lincoln.....			164,082	75,691.98	138,610	8,145
Linn.....			156,942	62,377.38	111,538	8,918
Logan.....			21,605	8,425.55	64,313	1,050

DAIRY PRODUCTS, 1918—CONCLUDED.

COUNTIES.	Cheese.		Butter.		Milk sold for butter and cheese.	Milk sold other than for butter and cheese.
	Pounds.	Value.	Pounds.	Value.		
Lyon.....			229,457	\$89,540.73	\$191,592	\$55,103
Marion.....	87	\$15.66	355,689	143,818.71	216,801	10,245
Marshall.....	395	71.10	330,237	128,792.43	252,441	18,020
McPherson.....	812	146.16	394,722	157,585.71	226,302	20,165
Meade.....			68,611	26,758.29	54,648	4,202
Miami.....			362,165	144,406.35	186,522	3,450
Mitchell.....	35	6.30	230,980	90,082.20	94,443	3,385
Montgomery.....	246	44.28	523,901	208,349.10	98,807	35,191
Morris.....	112	20.16	1,178,301	460,347.39	190,438	1,851
Morton.....			24,156	9,420.84	12,270	.....
Nemaha.....	580	104.40	260,518	101,602.02	253,461	31,218
Neosho.....			205,860	80,339.40	147,893	36,542
Ness.....	50	9.00	80,193	31,275.27	92,736	4,558
Norton.....	50	9.00	186,166	73,362.24	165,290	2,060
Osage.....	121	21.78	255,324	101,070.66	255,042	11,860
Osborne.....			236,757	92,335.23	195,290	13,847
Ottawa.....			195,013	76,055.07	153,142	3,215
Pawnee.....	900	162.00	123,620	48,211.80	56,665	14,587
Phillips.....			204,731	79,845.09	196,050	6,064
Pottawatomie.....	40	7.20	236,650	92,293.50	166,558	10,909
Pratt.....	30	5.40	203,441	80,391.99	50,871	5,641
Rawlins.....	195	35.10	83,289	32,482.71	61,586	1,786
Reno.....	2,041	367.38	2,558,967	1,064,409.69	279,581	56,410
Republic.....	400	72.00	205,260	80,051.40	158,883	32,889
Rice.....			229,513	89,811.15	122,649	6,886
Riley.....	410	73.80	224,702	89,606.25	92,172	37,200
Rooks.....			160,801	62,712.39	132,106	9,568
Rush.....	55	9.90	56,036	21,854.04	72,977	3,499
Russell.....	11	1.68	118,952	46,391.28	95,965	22,841
Saline.....	5,030	905.40	239,304	94,528.56	134,052	2,734
Scott.....			41,122	16,037.58	48,920	2,588
Sedgwick.....	5,159	928.62	2,389,523	993,354.48	259,480	260,415
Seward.....			178,382	73,741.86	19,547	5,949
Shawnee.....			8,776,461	3,681,333.24	260,352	46,107
Sheridan.....	250	45.00	71,774	27,591.86	80,208	1,926
Sherman.....	75	13.50	46,517	18,141.63	66,858	8,310
Smith.....			262,864	102,516.96	232,845	16,908
Stafford.....			180,033	70,212.87	56,291	8,506
Stanton.....			12,975	5,060.25	4,689	.....
Stevens.....			27,749	10,822.11	20,992	342
Sumner.....	50	9.00	394,993	157,087.86	284,226	30,595
Thomas.....			56,060	21,863.40	63,335	1,365
Trego.....			61,650	24,043.50	77,042	2,930
Wabunsee.....			181,648	70,842.72	172,166	6,781
Wallace.....			18,022	7,028.58	37,454	80
Washington.....	655	117.90	389,552	154,565.28	318,389	21,006
Wichita.....			19,784	7,715.76	41,805	165
Wilson.....	920	165.60	290,435	115,783.05	105,150	10,254
Woodson.....			132,965	51,856.35	61,852	2,030
Wyandotte.....	235	42.30	178,696	73,256.64	44,205	172,914

*Condensed milk, 12,939,302 pounds, value \$1,161,945.32, of which Dickinson county reported 672,960 pounds value \$60,431.81; Franklin county 2,408,615 pounds, value \$216,293.63; Jefferson county 10,500 pounds, value \$912.90; Leavenworth county 1,036,731 pounds, value \$93,098.44; and Sumner county 8,810,496 pounds, value \$791,182.54.

CREAM SEPARATORS, SILOS AND TRACTORS.

TABLE showing the number of each, March 1, 1917, and March 1, 1918.

COUNTIES.	Cream Separators.		Silos.		Tractors.	
	1917.	1918.	1917.	1918.	1917.	1918.
The State.....	78,924	86,806	10,610	11,561	4,504	5,415
Allen.....	956	1,007	85	82	23	32
Anderson.....	855	966	173	174	21	41
Atchison.....	829	780	194	97	35	31
Barber.....	485	571	210	173	51	60
Barton.....	952	963	62	91	110	137
Bourbon.....	942	1,124	105	134	8	12
Brown.....	961	1,107	76	83	35	35
Butler.....	1,014	1,132	261	267	86	44
Chase.....	378	398	160	124	11	13
Chautauqua.....	483	541	73	62	19	14
Cherokee.....	1,139	997	89	80	51	51
Cheyenne.....	369	455	23	23	33	52
Clark.....	126	239	31	48	28	33
Clay.....	1,058	1,356	99	135	48	43
Cloud.....	857	1,111	36	73	51	62
Coffey.....	857	933	115	76	17	50
Comanche.....	237	295	36	46	43	51
Cowley.....	1,455	1,421	230	257	98	70
Crawford.....	816	1,081	50	68	9	38
Decatur.....	774	873	52	64	17	28
Dickinson.....	1,411	1,472	252	304	99	135
Doniphan.....	193	210	33	30	14	20
Douglas.....	1,054	1,067	201	212	28	54
Edwards.....	395	444	53	77	39	59
Elk.....	706	767	135	119	21	22
Ellis.....	795	797	29	47	131	103
Ellsworth.....	791	789	74	73	44	43
Finney.....	271	346	31	54	22	21
Ford.....	613	609	61	76	96	125
Franklin.....	1,054	1,035	189	214	26	31
Geary.....	333	342	45	33	25	27
Gove.....	335	450	21	26	39	36
Graham.....	728	725	39	67	15	19
Grant.....	50	47	1	7	7	3
Gray.....	307	352	30	32	51	60
Greeley.....	111	126	18	21	5	10
Greenwood.....	762	920	249	208	22	26
Hamilton.....	148	142	3	6	2	15
Harper.....	740	775	87	91	37	62
Harvey.....	1,014	1,022	113	120	77	142
Haskell.....	146	135	5	2	36	17
Hodgeman.....	329	432	29	23	38	39
Jackscn.....	1,117	1,129	126	106	25	40
Jefferson.....	809	676	147	127	26	38
Jewell.....	1,557	1,711	173	226	38	28
Johnson.....	560	665	93	118	53	55
Kearny.....	135	200	24	35	3	4
Kingman.....	807	931	271	270	83	75
Kiowa.....	374	427	36	45	41	63
Labette.....	1,487	1,478	207	179	52	64
Lane.....	193	261	7	11	22	20
Leavenworth.....	499	579	213	214	24	44
Lincoln.....	911	976	112	146	40	53
Linn.....	668	695	87	78	12	15
Logan.....	234	282	34	34	14	17

CREAM SEPARATORS, SILOS AND TRACTORS—CONCLUDED.

COUNTIES.	Cream Separators.		Silos.		Tractors.	
	1917.	1918.	1917.	1918.	1917.	1918.
Lyon.....	1,203	1,348	298	256	25	46
Marion.....	1,593	1,684	139	176	66	110
Marshall.....	1,657	1,756	101	93	47	39
McPherson.....	1,627	1,757	186	239	143	182
Meade.....	418	500	81	68	69	66
Miami.....	1,035	1,163	123	118	18	41
Mitchell.....	1,018	975	139	135	30	46
Montgomery.....	1,078	1,168	80	97	41	61
Morris.....	787	940	121	137	37	34
Morton.....	99	108	8	8	8	21
Nemaha.....	1,302	1,522	85	136	21	30
Necosho.....	1,036	1,177	85	95	18	38
Ness.....	532	649	15	26	55	58
Norton.....	1,003	1,117	115	194	13	17
Osage.....	1,219	1,452	161	169	14	47
Osborne.....	1,225	1,263	127	196	94	84
Ottawa.....	967	1,120	71	112	47	57
Pawnee.....	479	659	98	139	123	179
Phillips.....	1,463	1,458	147	192	34	34
Pottawatomie.....	860	1,057	142	126	58	59
Pratt.....	583	628	76	85	76	84
Rawlins.....	465	575	14	15	33	47
Reno.....	1,606	1,995	391	435	138	198
Republic.....	1,155	1,261	81	91	43	46
Rice.....	906	1,039	170	208	56	59
Riley.....	563	689	135	142	34	41
Rooks.....	873	930	51	144	65	70
Rush.....	652	689	24	38	111	111
Russell.....	859	898	26	26	57	60
Saline.....	957	1,031	129	142	81	87
Scott.....	199	284	4	12	12	25
Sedgwick.....	1,381	1,396	403	418	109	115
Seward.....	203	186	61	66	34	29
Shawnee.....	795	879	140	127	20	35
Sheridan.....	484	617	32	38	33	39
Sherman.....	343	353	32	50	18	26
Smith.....	1,546	1,595	68	84	27	34
Stafford.....	777	814	84	117	51	53
Stanton.....	42	58	3	3	8	9
Stevens.....	108	152	18	19	12	21
Sumner.....	1,568	1,724	326	345	104	162
Thomas.....	366	422	35	43	80	85
Trego.....	487	576	51	55	69	47
Wabaunsee.....	907	982	171	186	50	63
Wallace.....	211	177	24	24	10	11
Washington.....	1,642	1,768	116	148	54	61
Wichita.....	178	232	5	5	4	4
Wilson.....	671	824	70	88	31	41
Woodson.....	532	623	101	92	16	15
Wyandotte.....	84	62	14	15	6	6

APICULTURE, 1917.

TABLE showing stands of bees, pounds and value of honey and wax produced, for the year ending March 1, 1917.

COUNTIES.	Stands of bees.	Honey.		Beeswax.	
		Pounds.	Value.	Pounds.	Value.
The State.....	67,694	1,239,930	\$223,187.40	16,906	\$4,733.63
Allen.....	1,093	24,722	\$4,449.96	605	\$169.40
Anderson.....	1,216	22,640	4,075.20	13	3.64
Atchison.....	1,208	31,962	5,753.16	190	53.20
Barber.....	117	1,444	259.92	170	47.60
Barton.....	77	1,015	182.70	250	70.00
Bourbon.....	996	12,605	2,322.90	35	9.80
Brown.....	1,056	21,803	3,924.54	63	17.64
Butler.....	2,597	43,676	7,861.63	777	217.56
Chase.....	725	7,117	1,281.06	1,024	2'6.72
Chautauqua.....	774	15,193	2,734.74	85	23.80
Cherokee.....	1,419	22,113	3,980.34	145	40.60
Cheyenne.....	1				
Clark.....	1				
Clay.....	174	3,755	675.90	52	14.56
Cloud.....	497	5,763	1,037.34	15	4.20
Coffey.....	1,841	39,017	7,023.06	439	122.92
Comanche.....	1				
Cowley.....	2,049	35,421	6,375.78	100	28.00
Crawford.....	1,041	22,460	4,042.80	108	30.24
Decatur.....	84	678	122.04	15	4.20
Dickinson.....	1,518	32,895	5,921.10	638	178.64
Doniphan.....	937	17,102	3,078.36	1,322	370.16
Douglas.....	1,836	28,776	5,179.68	790	221.20
Edwards.....	21	40	7.20		
Elk.....	953	14,023	2,524.14	288	80.64
Ellis.....	1				
Ellsworth.....	29	145	26.10		
Finney.....	753	27,990	5,038.20	104	29.12
Ford.....	81	4,120	741.60		
Franklin.....	2,007	39,450	7,101.00	275	77.00
Geary.....	366	5,238	942.84	50	14.00
Gove.....	1				
Graham.....	1				
Grant.....					
Gray.....	25	169	30.42		
Greeley.....					
Greenwood.....	1,163	16,070	2,892.60	139	38.92
Hamilton.....	79	8,275	1,489.50	250	70.00
Harper.....	54	795	143.10		
Harvey.....	669	9,905	1,782.90	216	60.48
Haskell.....					
Hodgeman.....					
Jackson.....	1,755	23,990	4,318.20	191	53.48
Jefferson.....	2,243	45,186	8,133.48	101	28.28
Jewell.....	778	11,060	1,990.80		
Johnson.....	1,097	28,846	5,192.28	440	123.20
Kearny.....	135	4,390	790.20	100	28.00
Kingman.....	33	330	59.40		
Kiowa.....	1				
Labette.....	859	15,869	2,856.42	628	175.84
Lane.....					
Leavenworth.....	1,445	23,136	4,164.48	862	241.36
Lincoln.....	52	221	39.78	6	1.68
Linn.....	1,060	22,107	3,979.26	256	71.68
Logan.....	4	100	18.00		

APICULTURE, 1917—CONCLUDED.

COUNTIES.	Stands of bees.	Honey.		Beeswax.	
		Pounds.	Value.	Pounds.	Value.
Lyon.....	1,917	27,764	\$4,997.52	135	\$37.80
Marion.....	865	12,169	2,190.42	170	47.60
Marshall.....	1,560	33,776	6,079.68	474	132.72
McPherson.....	609	8,833	1,589.94	136	38.08
Meade.....	55	515	92.70	10	2.80
Miami.....	1,888	41,247	7,424.46	790	221.20
Mitchell.....	239	1,920	345.60		
Montgomery.....	987	8,856	1,594.08	250	70.00
Morris.....	1,218	23,337	4,200.66	386	108.08
Morton.....					
Nemaha.....	1,792	42,910	7,723.80	528	147.84
Neosho.....	998	13,898	2,501.64	60	16.80
Ness.....					
Norton.....	84	1,137	204.66	20	5.60
Osage.....	2,144	38,163	6,869.34	90	25.20
Osborne.....	316	4,979	896.22	164	45.92
Ottawa.....	311	5,650	1,017.00		
Pawnee.....	17	300	54.00		
Phillips.....	169	1,212	218.16		
Pottawatomie.....	1,020	13,120	2,361.60	71	19.88
Pratt.....	52	1,375	247.50		
Rawlins.....	33	635	114.30		
Reno.....	1,055	19,710	3,547.80	860	240.80
Republic.....	1,318	21,720	3,909.60	28	7.84
Rice.....	276	4,414	794.52	10	2.80
Riley.....	775	14,199	2,555.82	236	66.08
Rooks.....	65	550	99.00		
Rush.....					
Russell.....	71	460	82.80	25	7.00
Saline.....	338	6,263	1,128.24	40	11.20
Scott.....					
Sedgwick.....	1,742	42,080	7,574.40	207	57.96
Seward.....					
Shawnee.....	1,128	21,454	3,861.72	465	130.20
Sheridan.....	14				
Sherman.....					
Smith.....	978	11,423	2,056.14		
Stafford.....	209	3,305	594.90	30	8.40
Stanton.....					
Stevens.....					
Sumner.....	1,208	20,278	3,650.04	8	2.24
Thomas.....					
Trego.....	1,533	24,027	4,324.86	536	150.08
Wabausnce.....	1				
Wallace.....					
Washington.....	1,684	39,791	7,162.38	341	95.48
Wichita.....					
Wilson.....	1,274	26,358	4,744.44	64	17.92
Woodson.....	607	8,064	1,451.52		
Wyandotte.....	223	2,121	381.78	30	8.40

APICULTURE, 1918.

TABLE showing stands of bees, pounds and value of honey and wax produced, for the year ending March 1, 1918.

COUNTIES.	Stands of bees.	Honey.		Beeswax.	
		Pounds.	Value.	Pounds.	Value.
The State.....	41,206	551,777	\$137,944.25	7,183	\$2,154.90
Allen.....	759	9,885	\$2,471.25	50	\$15.00
Anderson.....	533	5,077	1,269.25	8	2.40
Atchison.....	315	1,438	359.50	60	18.00
Barber.....	79	1,310	327.50	3	90
Barton.....	102	1,533	383.25		
Bourbon.....	353	2,101	525.25		
Brown.....	719	8,569	2,142.25	152	45.00
Butler.....	1,273	24,236	6,059.00	970	291.00
Chase.....	666	11,311	2,827.75	516	154.80
Chautauqua.....	441	4,769	1,192.25	40	12.00
Cherokee.....	692	3,175	793.75	20	6.00
Cheyenne.....	1				
Clark.....	1				
Clay.....	197	2,597	649.25	8	2.40
Cloud.....	240	5,536	1,384.00	180	54.00
Coffey.....	1,166	12,964	3,241.00	13	3.90
Comanche.....					
Cowley.....	1,184	18,509	4,627.25	25	7.50
Crawford.....	516	6,689	1,672.25	29	8.70
Decatur.....	32	85	21.25		
Dickinson.....	1,051	14,046	3,511.50	130	39.00
Doniphan.....	526	9,586	2,396.50	30	9.00
Douglas.....	924	4,513	1,128.25	27	8.10
Edwards.....	19	1,435	358.75		
Elk.....	686	19,669	4,917.25	45	13.50
Ellis.....	1				
Ellsworth.....	38	465	116.25		
Finney.....	472	21,176	5,294.00	180	54.00
Ford.....	66	3,001	750.25		
Franklin.....	1,042	8,437	2,109.25	43	12.90
Geary.....	201	1,817	454.25	4	1.20
Gove.....					
Graham.....	5				
Grant.....					
Gray.....					
Greeley.....					
Greenwood.....	1,101	23,990	5,997.50	41	12.30
Hamilton.....	72	7,533	1,883.25	10	3.00
Harper.....	71	484	121.00		
Harvey.....	665	4,554	1,138.50	2	60
Haskell.....					
Hodgeman.....					
Jackson.....	539	4,794	1,198.50	25	7.50
Jefferson.....	850	5,706	1,426.50	13	3.90
Jewell.....	502	7,379	1,844.75	300	90.00
Johnsco.....	693	2,982	745.50		
Kearny.....	224	5,835	1,458.75	277	83.10
Kingman.....	38	107	26.75		
Kiowa.....	8				
Labette.....	336	2,319	579.75		
Lane.....					
Leavenworth.....	984	3,405	851.25	500	150.00
Lincoln.....	147	3,495	873.75	20	6.00
Linn.....	484	4,250	1,062.50	210	63.00
Logan.....					

APICULTURE, 1918—CONCLUDED.

COUNTIES.	Stands of bees.	Honey.		Beeswax.	
		Pounds.	Value.	Pounds.	Value.
Lyon.....	1,304	14,832	\$3,708.00	110	\$33.00
Marion.....	677	11,856	2,964.00	105	31.50
Marsuall.....	679	9,104	2,276.00	35	10.50
McPherson.....	493	6,023	1,505.75	505	151.50
Meade.....	7	24	6.00		
Miami.....	1,295	2,629	657.25	21	6.30
Mitnell.....	156	1,013	253.25	75	22.50
Montgomery.....	401	4,305	1,076.25	29	8.70
Morris.....	741	8,331	2,082.75	70	21.00
Morton.....					
Nemaha.....	989	10,016	2,504.00	159	47.70
Neosho.....	298	3,939	984.75		
Ness.....	2				
Norton.....	44	27	6.75		
Osage.....	1,536	11,997	2,999.25	50	15.00
Osborne.....	209	2,538	634.50	40	12.00
Ottawa.....	373	5,841	1,460.25	400	120.00
Pawnee.....	68	925	231.25	10	3.00
Phillips.....	175	1,631	407.75	25	7.50
Pottawatomie.....	425	3,729	932.25	13	3.90
Pratt.....	67	1,450	362.50		
Rawlins.....	44	534	133.50		
Reno.....	778	20,410	5,102.50	412	123.60
Republic.....	858	14,180	3,545.00		
Rice.....	335	14,889	3,722.25	92	27.60
Riley.....	573	12,002	3,000.50		
Rooks.....	16	220	55.00		
Rush.....	1				
Russell.....	73	230	57.50		
Saline.....	388	1,370	342.50		
Scott.....	1				
Sedgwick.....	1,555	32,646	8,161.50	203	60.90
Seward.....					
Shawnee.....	659	7,236	1,809.00	4	1.20
Sheridan.....					
Sherman.....					
Smith.....	515	3,419	854.75	1	30
Stafford.....	172	5,021	1,255.25		
Stanton.....					
Stevens.....					
Sumner.....	628	7,771	1,942.75	100	30.00
Thomas.....					
Trego.....					
Wabaunsee.....	882	10,100	2,525.00	310	93.00
Wallace.....					
Washington.....	1,301	23,554	5,888.50	163	48.90
Wichita.....					
Wilson.....	668	13,063	3,265.75	320	96.00
Woodson.....	432	4,110	1,027.50		
Wyandotte.....	374	50	12.50		

WOOD MARKETED.

TABLE showing value of wood marketed for the years 1917 and 1918.

COUNTIES.	1917.	1918.	COUNTIES.	1917.	1918.
The State.....	\$92,476	\$135,053	Leavenworth.....	\$5,477	\$5,699
Allen.....	\$1,822	\$4,762	Lincoln.....	85	484
Anderson.....	2,797	5,152	Linn.....	1,679	5,071
Atchison.....	1,657	1,552	Logan.....		
Barber.....	471	73	Lyon.....	1,621	1,704
Barton.....	17	121	Marion.....	849	1,157
Bourbon.....	190	278	Marshall.....	2,744	1,673
Brown.....	1,637	2,530	McPherson.....	242	296
Butler.....	676	1,508	Meade.....	278	290
Chase.....	687	108	Miami.....	4,093	1,873
Chautauqua.....	378	1,293	Mitchell.....	265	247
Cherokee.....	1,334	799	Montgomery.....	334	1,916
Cheyenne.....		22	Morris.....	1,227	425
Clark.....			Morton.....		
Clay.....	370	612	Nemaha.....	2,853	4,896
Cloud.....	43	671	Neosho.....	1,316	2,874
Coffey.....	1,615	947	Ness.....		45
Comanche.....	108	30	Norton.....	252	503
Cowley.....	727	1,083	Osage.....	1,605	1,510
Crawford.....	507	1,076	Osborne.....	1,043	579
Decatur.....	45	275	Ottawa.....	150	918
Dickinson.....	882	774	Pawnee.....		
Doniphan.....	4,522	6,173	Phillips.....	21	1,490
Douglas.....	3,729	10,839	Pottawatomie.....	1,842	2,141
Edwards.....		50	Pratt.....	15	80
Elk.....	878	683	Rawlins.....	1,008	105
Ellis.....		79	Reno.....	884	2,400
Ellsworth.....	194	392	Republic.....	308	1,230
Finney.....			Rice.....	346	276
Ford.....			Riley.....	1,328	1,372
Franklin.....	1,515	6,776	Rooks.....	320	
Geary.....	1,791	3,991	Rush.....	383	
Gove.....			Russell.....	50	380
Graham.....	420	1,325	Saline.....	249	221
Grant.....			Scott.....		
Gray.....	15		Sedgwick.....	390	1,628
Greeley.....			Seward.....		
Greenwood.....	886	868	Shawnee.....	6,432	6,734
Hamilton.....	583	30	Sheridan.....		406
Harper.....	20	35	Sherman.....	3	127
Harvey.....	439	689	Smith.....	395	35
Haskell.....			Stafford.....	10	
Hodgeman.....	396	35	Stanton.....		
Jackson.....	913	1,724	Stevens.....		
Jefferson.....	6,865	12,563	Sumner.....	562	1,039
Jewell.....	125	471	Thomas.....		525
Johnson.....	1,990	2,803	Trego.....		25
Kearny.....			Wabaussee.....	3,350	1,917
Kingman.....	201	254	Wallace.....		7
Kiowa.....		8	Washington.....	2,104	3,720
Labette.....	1,907	1,633	Wichita.....		
Lane.....			Wilson.....	2,093	
			Woodson.....	563	1,730
			Wyandotte.....	350	218

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